6523.0 - Household Income and Income Distribution, Australia, 2000-01

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Summary

Main Features

ABOUT THIS PUBLICATION

This publication presents the income and characteristics of households and persons resident in private dwellings in Australia, compiled from the 2000-01 Survey of Income and Housing Costs (SIHC).

CHANGES IN THIS ISSUE

This issue incorporates a range of methodological improvements in household income distribution measurement and presentation. These changes, explained in detail in the Explanatory Notes and Appendix 4, were first described in the Feature Article 'Revised Household Income Distribution Statistics', published in the June 2003 issue of **Australian Economic Indicators** (cat. no. 1350.0), which was released on 30 May 2003. That article also provided revised estimates of income distribution for 1994-95 to 1999-2000. The changes have been made in response to revised user requirements, developments in international theory and practice and to an observed increase in undercoverage of government cash transfers payments measured in the SIHC in recent years. The changes include:

- revised demographic benchmarking
- the use of household income instead of income unit income as the income variable most relevant to an individual's economic wellbeing
- the use of persons instead of income units in compiling measures of income distribution to better reflect the economic wellbeing of individuals, including children
- the introduction of benefit transfer benchmarking for 1999-2000 and 2000-01, based on the historical coverage rate achieved for benefit payments
- the use of the term equivalised income instead of the term equivalent income
- the use of equivalised disposable income instead of gross income for most analysis
- the use of the 'modified Organisation for Economic Co-operation and Development (OECD)' equivalence scale instead of the 'original OECD' equivalence scale or the Henderson equivalence scale
- the presentation of a wider range of income distribution measures, along with an increased emphasis on providing time series of the measures.

As a result of these changes, the publication has been much delayed. I apologise for any inconvenience to users of these statistics. Future issues of this publication should be much more timely.

EFFECTS OF ROUNDING

All figures have been rounded, and discrepancies may occur between sums of the component items and totals, and between the percentages as presented and those that could be calculated from the rounded figures.

ABBREVIATIONS

$m	million dollars
ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
ASNA	Australian System of National Accounts
Aust.	Australia
CPI	Consumer Price Index
DVA	Department of Veterans Affairs
FaCS	Family and Community Services
GST	Goods and Services Tax
MPS	Monthly Population Survey
NSW	New South Wales
NT	Northern Territory
OECD	Organisation for Economic Co-operation and Development
OOPS	One-off payment to seniors
PSI	principal source of income
Qld	Queensland
RSE	relative standard error
SA	South Australia
SE	standard error
SIHC	Survey of Income and Housing Costs
Tas.	Tasmania
Vic.	Victoria
WA	Western Australia

SUMMARY OF FINDINGS

INTRODUCTION

The economic wellbeing of individuals is largely determined by their command over economic resources. People's income and reserves of wealth provide access to many of the goods and services consumed in daily life. This publication provides indicators of the distribution of after tax (disposable) household cash income, after adjusting for household size and composition.

The estimates of disposable income in this publication are derived from the gross cash income data collected in the Survey of Income and Housing Costs (SIHC), after deducting estimates of income tax liability and the Medicare levy. Gross cash income is defined as regular and recurring cash receipts from wages and salaries, profit/loss from own unincorporated business, investment income in the form of interest, rent and dividends, private transfers in the form of superannuation and child support, and cash transfers from government pensions and allowances. The restriction to cash incomes is one of practical

measurement and is assessed to provide a reasonable, broad picture of the distribution of income as it changes over time. However, readers are advised that the relative mix of cash and non-cash incomes across subpopulations will be different, and can change over time.

While income is usually received by individuals, it is normally shared between partners in a couple relationship and with dependent children. To a lesser degree, there may be sharing with other members of the household. Even when there is no transfer of income between members of a household, nor provision of free or cheap accommodation, members are still likely to benefit from the economies of scale that arise from the sharing of dwellings. The income measures shown in this publication therefore relate to household income. However, larger households normally require a greater level of income to maintain the same material standard of living as smaller households, and the needs of adults are normally greater than the needs of children. The income estimates are therefore adjusted by equivalence factors to standardise the income estimates with respect to household size and composition while taking into account the economies of scale that arise from the sharing of dwellings. The equivalised disposable income estimate for any household in this publication is expressed as the amount of disposable cash income that a single person household would require to maintain the same standard of living as the household in question, regardless of the size or composition of the latter.

Appendix 2 provides a more detailed explanation of equivalised disposable income. It shows the differences in income measures when calculated from data at different stages in progression from gross household income, through disposable income, to person weighted equivalised disposable household income.

THE NEW TAX SYSTEM

The introduction of The New Tax System from 1 July 2000 impacted on the economic resources available to households in a number of ways, including:

- an increase in the rates of payment for recipients of government cash transfer benefits
- a decrease in income tax rates
- an increase in the average rate of indirect taxes levied on goods and services purchased by households.

The net impact of these three influences is likely to have differed between various groups in the population.

Changes made to transfer benefit rates and to income tax rates are both reflected in after tax measures of cash income, and therefore will be reflected in the comparisons between individual years in the time series presented in this publication. To the extent that the effects of the increase in benefit transfers and the reduction in income tax rates are not uniform across the population, income distribution indicators such as percentile ratios, income shares and the Gini coefficient will all reflect the impact of these changes.

The changes were larger in 2000-01 than have been experienced in previous years reported in this publication. The increase in government cash transfers benefits (up 13%) was much higher than in any of the previous five years (and nearly double the next highest annual increase experienced in those years). And whereas the income tax liability of households had increased in recent years, reflecting higher gross incomes and an increasing number of people receiving income, in 2000-01 the decrease in tax rates saw the average household income tax liability fall by 6%.

Comparisons of the value of disposable household income over time, such as the mean values and percentile values provided in table 1, have been adjusted in this publication for overall changes in the consumer price index (CPI). Since the CPI will reflect the price impacts of changes in indirect taxes, the CPI-adjusted income measures for 2000-01 reflect those impacts.
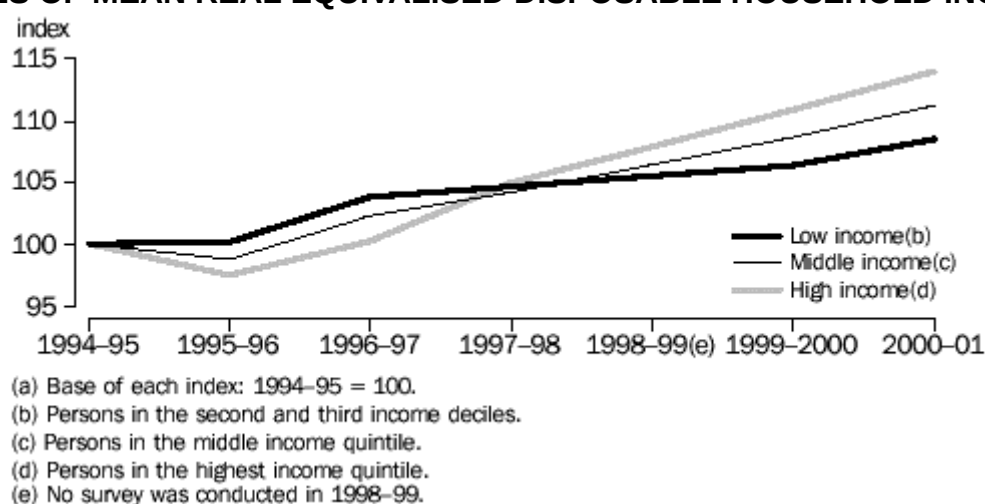
However, any differences in the impact of indirect tax rates on different groups in the population, for example because they tend to spend a greater or lesser proportion of their income on goods and services that had a higher or lower than average net impact from the indirect taxation changes being made, are not taken into account in the income measures presented in this publication. Analysis of the differential impact of indirect taxes requires detailed information on expenditure patterns, which is not available in the SIHC. The next issue of **Government Benefits, Taxes and Household Income, Australia**, (cat. no. 6537.0), to be released after the 2003-04 Household Income and Expenditure Survey has been completed, will present analyses of the impacts of both direct and indirect taxation on the total population and on population subgroups.

HOUSEHOLD INCOME

Changes since 1994-95

In 2000-01 there were approximately 18.9 million people living in private dwellings in Australia, up by 7% on the number of people in 1994-95. In real terms, equivalised disposable household income for all people, on average, increased by 12% between 1994-95 and 2000-01, from $419 to $469 per week (table 1). Over that same period the real mean income of low income people (i.e. the 20% of people with household incomes between the bottom 10% and the bottom 30% of incomes) increased by 8%, from $227 to $245 per week, with the increase spread reasonably evenly over the period. The real mean income of middle income and high income people increased by 12% (from $497 to $555 per week) and 14% (from $792 to $903 per week) respectively.

INDEXES OF MEAN REAL EQUIVALISED DISPOSABLE HOUSEHOLD INCOME(a)

(a) Base of each index: 1994–95 = 100.
(b) Persons in the second and third income deciles.
(c) Persons in the middle income quintile.
(d) Persons in the highest income quintile.
(e) No survey was conducted in 1998–99.

Household characteristics

Households with different income levels tend to differ with respect to other characteristics, as shown in table 5 and summarised in the following table. Wages and salaries were the principal source of income for households with middle and high income levels, while

government pensions and allowances dominated for low income households. However, low income households had the highest incidence of full ownership of their home, reflecting the high proportion of elderly people in the low income category.

HOUSEHOLD CHARACTERISTICS BY INCOME GROUP

		Low income(a)	Middle income(b)	High income(c)
Mean weekly equivalised disposable household income per week	$	245	413	903
Has PSI of wages and salaries(d)	%	15.2	73.7	87.9
Has PSI of government pensions and allowances(d)	%	75.9	6.1	-
Owns home without a mortgage	%	51.5	38.1	30.4
Owns home with a mortgage	%	15.8	34.8	46.4
Rents from state/territory housing authority	%	8.7	2.3	**0.2
Rents from private landlord	%	19.5	21.3	21.1
Average number of persons in the household	no.	2.3	2.9	2.5
Average number of earners in the household	no.	0.3	1.3	1.9

- nil or rounded to zero (including null cells)
** estimate has a relative standard error greater than 50% and is considered too unreliable for general use
(a) Persons in the second and third income deciles.
(b) Persons in the middle income quintile.
(c) Persons in the highest income quintile.
(d) Principal source of income.

Middle income households contained more people on average than high income households (2.9 compared to 2.5) but contained considerably less earners (1.3 compared to 1.9). In part, this reflects the different age profiles of the two groups. Table 5 shows that middle income households had an average of 0.9 persons under the age of 18 and 0.3 aged 65 and over, compared to 0.4 and 0.1 respectively for high income households. Low income households only had an average of 0.3 earners, and housed an average of 2.3 persons. Of these, 1.0 were 18 to 64 years, with 0.6 under 18 years and 0.7 persons aged 65 years and over.

The characteristics of Australian households are changing over time. Table 2 shows that the average number of persons per household declined from 2.69 to 2.58, or about 4%, between 1994-95 and 2000-01. There was no decline in the 65 and over age group, and over half the decline was in the under 18 age group, reflecting an 8% fall in that age group. There was also a fall in the proportion of households containing couple families. In contrast, the number of one parent families with dependent children increased. Each principal source of income retained its relative importance between 1994-95 and 2000-01, with about 57% of households primarily dependent on wages and salaries and about 28% on government pensions and allowances. Home ownership remained relatively stable at around 70% of households throughout this period, but an increasing proportion of owners had an outstanding mortgage.

Life cycle stages

The range of income levels across the population partly reflects the different life cycle stages that people have reached. A typical life cycle includes childhood, early adulthood, and the forming and maturing of families, as illustrated in table 8. Other family situations and household compositions are shown in table 7. The following table compares households in different life cycle stages.

INCOME AND HOUSEHOLD CHARACTERISTICS FOR SELECTED LIFE CYCLE GROUPS

Household composition	Average number of persons	Average number of earners	Proportion with govt. benefits as PSI(a)	Mean equivalised disposable household income per week	Proportion owning home without mortgage
	no.	no.	%	$	%
Lone person aged under 35	1.0	0.8	13.7	513	6.9
Couple only, reference person under 35	2.0	1.8	*2.8	692	6.9
Couple with dependent children only					
Eldest child under 5	3.4	1.4	9.4	466	8.9
Eldest child 5 to 14	4.2	1.5	9.9	434	20.6
Eldest child 15 to 24	4.2	1.6	8.1	481	33.0
Couple with					
Dependent and non-dependent children only	4.9	2.4	*6.7	502	39.5
Non-dependent children only	3.3	2.2	11.0	597	61.2
Couple only, reference person 55 to 64	2.0	0.9	28.2	475	72.6
Couple only, reference person 65 and over	2.0	0.1	71.7	321	88.5
Lone person 65 and over	1.0	-	79.2	274	73.7
One parent, one family households with dependent children	3.0	0.7	53	329	13.8

* estimate has a relative standard error of between 25% and 50% and should be used with caution
- nil or rounded to zero (including null cells)
(a) Principal source of income.

Of the groups included in the table, the group with the highest average income was younger couples without children. Their mean equivalised disposable household income was $692 per week, with the average number of earners in the household being 1.8. For couples with dependent children only, and with the eldest child being under five, the average numbers of earners dropped by about one-quarter, to 1.4. Because those households consisted of an average of 3.4 persons, compared to 2.0 in younger couple only households, their average equivalised disposable household income of $466 per week was about one-third lower than the $692 per week income of the younger couple only households. Average incomes were higher for households with non-dependent children, reflecting higher proportions of earners in these households, but were lower again for households comprising older couples and lone persons where the numbers of earners declined substantially.

People aged 65 and over had the lowest mean incomes, with lone persons' incomes at $274 per week, somewhat lower than older couple only household incomes at $321 per week. Elderly lone persons were more likely than elderly couples to have government pensions and benefits as their principal source of income (79% compared to 72%), while couples were more likely to fully own their home (88% compared to 74%).

Households comprising one parent with dependent children had a mean income of $329 per week, similar to that of elderly couples ($321 per week), but only 14% of the one parent households fully owned their home and therefore a substantially greater proportion had to make mortgage or rental payments from their income. Of these households, 53% had government pensions and benefits as their principal source of income. On average they had 0.7 earners in the household.

States and territories

There are considerable differences in the average levels of income between the states and territories, with three having mean equivalised disposable household incomes below the

national average of $469 per week (see table 12). Tasmania's mean weekly income was 17% below the national average income level, followed by South Australia (9% below) and Queensland (6% below). In table 12 the Northern Territory is shown with the highest mean income (34% above the national average). This high income level reflects in part the younger age profile of the NT. However, it also reflects the exclusion from the results of sparsely settled areas of the NT which, if included, would be likely to significantly reduce the average incomes in the NT. The Australian Capital Territory recorded the second highest average income (24% above the average), also reflecting in part its relatively younger population. New South Wales and Victoria both recorded incomes at 3% above the national average, with Western Australian incomes at about the national level.

There are also considerable differences between the incomes recorded in capital cities in Australia compared to those earned elsewhere. At the national level, average incomes in the capital cities were 20% above those in the balance of state, and in each state (separate information is not available for the NT and ACT) the capital city average incomes were above those in the balance of state. The largest difference was recorded for NSW where the capital city incomes were 30% above the average incomes across the rest of the state.

INCOME DISTRIBUTION

While the mean equivalised disposable household income of all households in Australia in 2000-01 was $469 per week, the median (i.e. the midpoint when all people are ranked in ascending order of income) was somewhat lower at $414 (shown as P50 in table 1). This difference reflects the typically asymmetric distribution of income where a relatively small number of people have relatively very high household incomes, and a large number of people have relatively lower household incomes, as illustrated in the following frequency distribution graph.

DISTRIBUTION OF EQUIVALISED DISPOSABLE HOUSEHOLD INCOME 2000-01
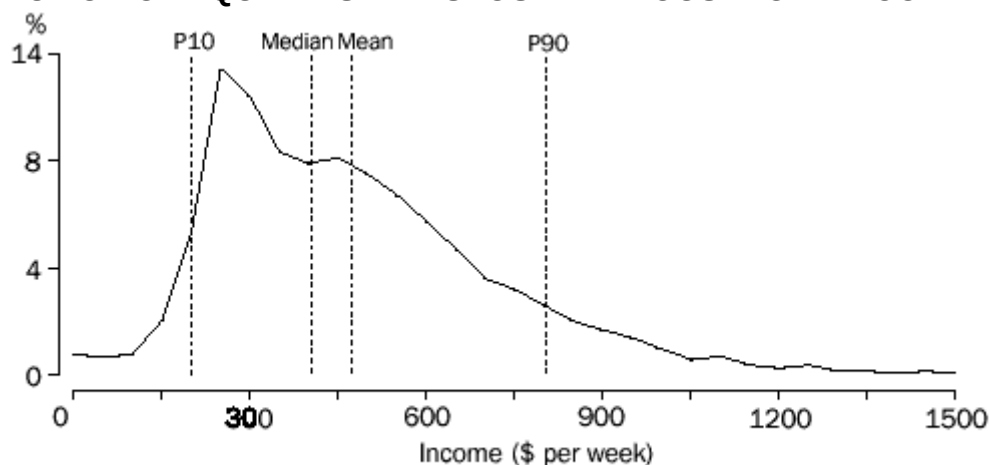
Note: In this graph income is presented in $50 ranges.

Percentile ratios are one measure of the spread of incomes across the population. P90 (i.e. the income level dividing the bottom 90% of the population from the top 10%) and P10 (i.e. dividing the bottom 10% of the population from the rest) are shown on the above graph. In 2000-01, P90 was $802 per week and P10 was $202 per week, giving a P90/P10 ratio of 3.97. Various percentile ratios for six years are shown in the table below, and the changes in these ratios (discussed below) can provide a picture of changing income distribution over time.

Another measure of income distribution is provided by the income shares going to groups of people at different points in the income distribution. The table below shows that, in 2000-01, 10.5% of total equivalised disposable household income went to people in the 'low income' group (i.e. the 20% of the population in the 2nd and 3rd income deciles), with 38.5% going to the 'high income' group (i.e. the 20% of the population in the highest income quintile).

The Gini coefficient is a single statistic that lies between 0 and 1 and summarises the degree of inequality, with values closer to 0 representing a lesser degree of inequality, and values closer to 1 representing greater inequality. For 2000-01, the Gini coefficient was 0.311. The coefficients for earlier years are shown below.

SELECTED INCOME DISTRIBUTION INDICATORS, EQUIVALISED DISPOSABLE HOUSEHOLD INCOME

		1994-95	1995-96	1996-97	1997-98	1999-2000	2000-01
Ratios of incomes of households at top of selected income percentiles P90/P10							
P90/P10	ratio	3.77	3.74	3.66	3.77	3.89	3.97
P80/P20	ratio	2.56	2.58	2.54	2.56	2.64	2.63
P80/P50	ratio	1.55	1.57	1.56	1.56	1.57	1.56
P20/P50	ratio	0.61	0.61	0.61	0.61	0.59	0.59
Percentage share of total income received by persons with							
Low income(a)	%	10.8	10.9	11.0	10.8	10.5	10.5
Middle income(b)	%	17.7	17.7	17.8	17.6	17.6	17.7
High income(c)	%	37.8	37.3	37.1	37.9	38.4	38.5
Gini coefficient	no.	0.302	0.296	0.292	0.303	0.310	0.311

(a) Persons in the second and third income deciles.
(b) Persons in the middle income quintile.
(c) Persons in the highest income quintile.

Changes since 1994-95

Changes in the income distribution measures presented in this publication tend to be relatively small from year to year but trends can emerge over longer time periods. Data are available from the SIHC from 1994-95.

While all the indicators in the previous table rose over the period 1994-95 to 2000-01, only the increase in the P90/P10 ratio and the decline in the share of total income going to persons with low income are sufficiently large to be regarded as statistically significant at the 95% confidence level (see Appendix 3). Relaxing the confidence level to 90% results in the increase in the Gini coefficient also being statistically significant. The indicators therefore suggest some possible rise in income inequality over the second half of the 1990s.

In addition to looking at the changes in income distribution measures from one year to another, a perspective on changes in income distribution can also be obtained by bringing data from the intervening years into the analysis. Looking at the results over the period 1994-95 to 1997-98 and comparing them with observations from 1999-2000 to 2000-01 shows somewhat greater changes in the income distribution measures than those resulting from a comparison between the single years of 1994-95 and 2000-01. Because the effective samples are greater when data are combined across years, and the sampling errors are therefore lower, the increases in the inequality indicators can be regarded as statistically

significant with a higher degree of confidence, further supporting a conclusion of some increase in inequality.

About this Release

ABOUT THIS RELEASE

Previously: Survey of Income and Housing Costs and Amenities: Income Distribution: Income Units, Australia. Released under that title for 1990. Current title used for 1994-95 issues onwards.

Details are presented on the distribution of income in Australia, data on the various characteristics of households (married couple, one parent and one-person units), their composition, and the principal source of income, age and employment status of reference person.

Irregular from 1978-79 to 1990. Annual as from 1994-95. Biannual from 2001.

Explanatory Notes

Explanatory Notes

INTRODUCTION

1 This publication presents the income and characteristics of households and persons resident in private dwellings in Australia, compiled from the 2000-01 Survey of Income and Housing Costs (SIHC). The survey collected information on sources of income, amounts received and characteristics of persons aged 15 years and over resident in private dwellings throughout non-sparsely settled areas of Australia.

2 The SIHC was conducted continuously from 1994-95 to 1997-98, and then in 1999-2000, 2000-01 and 2002-03. The results from the 2002-03 SIHC which included an expanded sample of 11,000 households (up from about 7,000 households in earlier years), will be released in 2004. From 2003-04 the income component of the former Household Expenditure Survey (HES) has been expanded in the new, six-yearly Household Income and Expenditure Survey (HIES), an 11,000 household survey which also incorporates a number of other changes to improve income estimation and analysis. In between the six-yearly HIES cycles, there will be two cycles of an 11,000 household SIHC (to be conducted next in respect of each of 2005-06 and 2007-08), which together with the HIES provide an ongoing biennial household income survey.

3 Previous surveys of income were conducted by the Australian Bureau of Statistics (ABS) in 1979, 1982, 1986 and 1990. These surveys were generally conducted over a two-month period, compared to a twelve-month period for the SIHC. Compared with income surveys conducted previously, the SIHC also included improvements to the survey weighting and

estimation procedures, changes to the population in scope and changes to interviewing methods.

CHANGES IN THIS ISSUE

4 This issue incorporates a range of methodological improvements in household income distribution measurement and presentation. These changes, explained in detail later in these Explanatory Notes and in Appendix 4, were first described in the Feature Article 'Revised Household Income Distribution Statistics', published in the June 2003 issue of **Australian Economic Indicators** (cat. no. 1350.0), which was released on 30 May 2003. That article also provided revised estimates of income distribution for 1994-95 to 1999-2000. The changes have been made in response to revised user requirements, developments in international theory and practice and to an observed increase in undercoverage of government cash transfers payments measured in the SIHC in recent years. The changes include:

- revised demographic benchmarking
- the use of household income instead of income unit income as the income variable most relevant to an individual's economic wellbeing
- the use of persons instead of income units in compiling measures of income distribution to better reflect the economic wellbeing of individuals, including children
- the introduction of benefit transfer benchmarking for 1999-2000 and 2000-01, based on the historical coverage rate achieved for benefit payments
- the use of the term equivalised income instead of the term equivalent income
- the use of equivalised disposable income instead of gross income for most analysis
- the use of the 'modified OECD' equivalence scale instead of the 'original OECD' equivalence scale or the Henderson equivalence scale
- the presentation of a wider range of income distribution measures, along with an increased emphasis on providing time series of the measures.

5 While income distribution is analysed in terms of persons rather than income units, persons are mainly described in terms of the characteristics of the households to which they belong and therefore the majority of the tables in this publication provide detail about households.

6 Discussion on units of analysis is provided in the following section on concepts and definitions. Appendix 1 describes the various income distribution measures used in this publication, and Appendix 2 describes equivalised disposable income, and presents the progression of statistics from a gross household income basis, through deductions for taxation to disposable household income, and compares the household weighted and person weighted equivalised measures.

7 The statistics presented in the main body of this publication relate to data compiled to represent 'current' income, which for wages and salaries and government transfers income will be the 'usual' cash income received in the most recent payment period at the time of interview. Appendix 5 presents and describes, for the first time in this publication, 'annual' income measures that reflect total incomes for the previous financial year. Appendix 5 explains how current income differs from annual income and notes some of the advantages and disadvantages of the two types of measure.

8 Paragraph 4 notes that the demographic benchmarks, used to expand survey data to population estimates, have also been revised. Historic data have been revised by calibrating estimates of the number of persons and households to the most up-to-date demographic

data available. These benchmarks are described in more detail in paragraphs 35 to 41 below. Compared with earlier issues of this publication, the main changes to demographic benchmarks have been the inclusion of separate benchmarks, by state/territory, both for children under 5 years of age and for those from 5 years to under 15 years of age. Also, from 1999-2000, estimates of the value of government cash transfers have been calibrated to maintain consistency with aggregate social security payments made by the Department of Family and Community Services and the Department of Veterans' Affairs. Calibration to external benchmarks is discussed in paragraph 42 below, while information on the investigations which led to the calibration of government cash transfers to aggregate payments for 1999-2000 and 2000-01 is contained in Appendix 4.

9 The ABS would welcome feedback on these changes. Comments may be sent to the Director, Living Conditions Section, ABS, Locked Bag 10, BELCONNEN, ACT, 2616 or emailed to leon.pietsch@abs.gov.au.

CONCEPTS AND DEFINITIONS

10 The concepts and definitions relating to statistics of income are described in the following section. Other definitions are included in the Glossary.

Person and household data

11 The major determinant of economic wellbeing for most people is the level of income they and other family members in the same household receive.

12 While income is usually received by individuals, it is normally shared between partners in a couple relationship and with dependent children. To a lesser extent, it may be shared with other children, other relatives and possibly other people living in the same household, for example through the provision of free or cheap accommodation. This is particularly likely to be the case for children other than dependants and other relatives with low levels of income of their own. Even when there is no transfer of income between members of a household, nor provision of free or cheap accommodation, members are still likely to benefit from the economies of scale that arise from the sharing of dwellings.

13 Household characteristics, including household income, are therefore the information mainly required for analysing income distribution. However, it is the number of people who belong to households with particular characteristics, rather than the number of households with those characteristics, that is of primary interest in measuring income distribution and leads to the preference for the equal representation of those persons in such analysis. For example, if the person is used as the unit of analysis rather than the household, then the representation in the income distribution of each person in a household comprising four persons is the same as that for each person in a household comprising two persons. In contrast, if the household were to be used as the unit of analysis, each person in the four person household would only have half the representation of each person in the two person household.

14 In this publication, the income distribution measures are all calculated with respect to persons, including children. Such measures are sometimes known as person weighted estimates. They are described in more detail in Appendix 1. Nevertheless, as most of the relevant characteristics of persons relate to their household circumstances, tables 5 to 12 primarily describe the households to which people belong.

Income

15 Income refers to regular and recurring cash receipts from employment, investments and transfers from government, private institutions and other households. Gross income is the sum of the income from all these sources before income tax and the Medicare levy have been deducted. This differs from the household income definition used in the Australian System of National Accounts (ASNA). A detailed comparison of 1997-98 SIHC and ASNA estimates was published as an appendix to the 1997-98 issue of this publication. Comparison of 2000-01 SIHC and ASNA data indicates that the relationship between the two estimates has not changed significantly since 1997-98.

16 Sources from which income may be received include:

- wages and salaries (whether from an employer or own corporate enterprise)
- profit/loss from own unincorporated business (including partnerships)
- investment income (interest, rent, dividends, royalties)
- government cash transfers (pensions, allowances, benefits)
- private cash transfers (e.g. superannuation, regular workers' compensation, income from annuities and child support).

17 Receipts which are excluded from income because they are not regular or recurring cash payments include the following:

- income in kind including employee benefits such as the provision of a house or a car
- employer contributions to pension and superannuation funds
- capital transfers such as inheritances and legacies, maturity payments on life insurance policies, lump sum compensation for injuries or other damage
- capital gains and losses.

18 The aged persons' savings bonus and self-funded retirees' supplementary bonus, paid as part of the introduction of The New Tax System in 2000-01, are regarded as capital transfers as they were designed to help retired people maintain the value of their savings and investments following the introduction of the GST. However, the one-off payment to seniors announced in the May 2001 Budget and paid in 2000-01 is included as income as it was primarily a supplement to existing income support payments.

19 While income is generally a good indicator of economic wellbeing, there are some circumstances which present particular difficulties. Some households report extremely low and even negative income in the SIHC, which places them well below the safety net of income support provided by social security pensions and allowances. Households may underreport their incomes in the SIHC at all income levels, including low income households. However, households can correctly report low levels of income if they incur losses in their unincorporated business or have negative returns from their other investments. Studies of income and expenditure reported in the 1998-99 ABS Household Expenditure Survey (HES) have shown that such households in the bottom income decile and with negative gross incomes tend to have expenditure levels that are comparable to those of households with higher income levels (and slightly above the average expenditures recorded for the fifth decile), indicating that these households have access to economic resources, such as wealth, which are not measured in the SIHC, or that the instance of low or negative income is temporary, perhaps reflecting business or investment start up. Other households in the bottom income decile in the 1998-99 HES had average incomes at about the level of the single pension rate, were predominately single person households, the average age of the reference person was 53 years, and their principal source of income was largely government cash benefits. But on average, these households also had expenditures above the average of the households in the second decile, which is not inconsistent with the

use of assets to maintain a higher standard of living than implied by their incomes alone. Therefore it can be reasonably concluded that most are unlikely to be suffering extremely low levels of economic wellbeing, and income distribution analysis may lead to inappropriate conclusions if such households are included. For this reason, tables showing statistics classified by income quintile include a supplementary category comprising the second and third deciles, which can be used as an alternative to the lowest income quintile. (For an explanation of quintiles and deciles, see Appendix 1.)

Weekly income

20 Income is collected using a number of different reporting periods, such as the last financial year for own business and property income, and the usual payment for a period close to time of interview for wages and salaries, other sources of private income and government cash transfers. The income is divided by the number of weeks in the reporting period. Estimates of weekly income in this publication therefore do not refer to a given week within the reference year of the survey.

Equivalised disposable income

21 For most analysis in this publication, gross income (as described in the previous paragraphs) is adjusted in two ways to facilitate the comparison of economic wellbeing between households. First, disposable income is derived by deducting estimates of personal income tax and the Medicare levy from gross income. Disposable income better represents the economic resources available to meet the needs of households. A more detailed analysis of 'final' income which looks at the impact of indirect government benefits (i.e. non-cash benefits) and indirect taxes requires detailed information on expenditure patterns which is not available in the SIHC. For details of this type of 'final' income analysis see **Government Benefits, Taxes and Household Income, Australia, 1998-99** (cat. no. 6537.0).

22 Disposable income is adjusted by the application of an equivalence scale to facilitate comparison of income levels between households of differing compositions, reflecting the requirement of a larger household to have a higher level of income to achieve the same standard of living as a smaller household. Where disposable income is negative, it is set to zero equivalised disposable income. For more information on equivalised income see Appendix 2.

SURVEY METHODOLOGY

Scope and coverage

23 The survey collects information by personal interview from usual residents of private dwellings in urban and rural areas of Australia, covering about 98 per cent of the people living in Australia. Private dwellings are houses, flats, home units, caravans, garages, tents and other structures that are used as places of residence at the time of interview. Long-stay caravan parks are also included. These are distinct from non-private dwellings which include hotels, boarding schools, boarding houses and institutions. Residents of non-private dwellings are excluded.

24 The survey also excludes:

- households which contain members of non-Australian defence forces stationed in Australia
- households which contain diplomatic personnel of overseas governments

- households in remote and sparsely settled areas of the Northern Territory, accounting for about 20% of the population in the Northern Territory.

Sample design

25 The sample for the income survey is a sub-sample of private dwellings included in the ABS Monthly Population Survey (MPS). The MPS sample is a multistage selection of private dwellings and a list sample of other dwellings.

26 The sample is suitable for producing reliable estimates at the Australian level for income of residents in private dwellings, classified by different population groups based on household composition (such as couples with children), income levels or income sources. Estimates at the state and territory level for broad aggregates are generally reliable although some estimates for Tasmania, the Northern Territory and the Australian Capital Territory should be used with caution (see Appendix 3).

27 In each month in 2000-01 a sample of approximately 650 dwellings was selected for the SIHC from the responding households in the MPS. Over the year, this resulted in approximately 15,500 persons over the age of 15 being included in the sample and, of these, about 85% responded.

Non-response and imputation

28 Fully non-responding households are those selected for the survey but from which no information is included in the survey results. They include:

- those affected by death or illness of a household member
- those in which more than half of the persons over 15 in the household did not respond because they could not be contacted, had language problems or refused to participate.

29 Partial response occurs when:

- some items of data in a schedule are missing because a person is unable or unwilling to provide the data
- for a household, not every person over 15 residing in the household responds but at least half of these persons provide data.

30 In the first case of partial response above, the data provided are retained and the missing data are imputed by replacing each missing value with a value reported by another person (referred to as the donor).

31 For the second type of partial response, the data for the persons who did respond are retained, and data for each missing person are provided by imputing data values equivalent to those of a fully responding person (donor). Imputation using donor records is also applied for fully non-responding households that comprise one person or a sole parent whose children are all under the age of 15. Information about the household composition is obtained from the MPS.

32 Donor records are selected by matching information on sex, age and labour force characteristics of the person with missing information. As far as possible, the imputed information is an appropriate proxy for the information that is missing. Depending on which values are to be imputed, donors are chosen from the pool of individual records with complete information for the block of questions where the missing information occurs.

Final sample

33 The sample on which estimates are based, or the final sample, is composed of persons for which all necessary information is available. The information may have been wholly provided at the interview (fully-responding) or may have been completed through imputation for partially responding or non-responding. The final sample consists of 6,786 households, comprising 13,193 persons 15 years old and over. All income information was imputed for 243 households comprising one adult or one adult with children under 15 years old, and was imputed for one or more persons in 201 partially responding multi-person households.

NUMBER OF RESPONDING HOUSEHOLDS

	Capital city		Balance of State		Total	
	Households	**Persons (a)**	**Households**	**Persons (a)**	**Households**	**Persons (a)**
NSW	930	1927	599	1097	1529	3024
Vic.	978	1932	422	813	1400	2745
Qld	577	1137	641	1202	1218	2339
SA	673	1275	217	409	890	1684
WA	668	1347	217	414	885	1761
Tas.	189	342	293	547	482	889
NT	101	183	-	-	101	183
ACT	281	568	-	-	281	568
Aust.	**4397**	**8711**	**2389**	**4482**	**6786**	**13193**

- nil or rounded to zero (including null cells)
(a) Number of persons aged 15 years and over.

Imputation of one-off payment to seniors

34 Certain cash receipts that should be regarded as income are not reported in SIHC due to their irregular or one-off nature. For example, annual wage or salary bonuses will not be reported by householders as part of their 'usual' cash income. While these types of income are routinely excluded from SIHC income measures, their exclusion is unlikely to affect comparisons over time unless the scale and distribution of such payments to householders changes. However, as noted in paragraph 18 above, in 2000-01 about $600m was paid in government cash transfers as part of the one-off payment to seniors to supplement the age pension or Department of Veterans' Affairs service pension and therefore should be treated as income. The payment to eligible individuals was $300 each, representing 3% of a single person's full age pension in 2000-01, and this amount has been added to the income of all respondents who were of age pension age and who reported receiving any government income support payment.

Weighting

35 Expansion factors, or weights, are values by which information for the sample is multiplied to produce estimates for the whole population. From this survey, estimates are produced referring to persons, to income units (although these are not included in this publication) and to households, and the weights are calculated so that each person in an income unit or household has the same weight and that weight is also used for the income unit and household.

36 Final weights are calculated through an iterative procedure in which initial weights are

adjusted by a calibration process to ensure that survey estimates conform to independently estimated benchmarks. The initial weights are equal to the inverse of the probability of selection in the survey, with initial person weights being equal to initial household weights.

37 Four types of benchmarks are used in the calibration of the final weights:

- numbers of persons aged 15 and over
- numbers of children under age 15
- numbers of households
- for 1999-2000 and 2000-01 estimates, the value of government benefit cash transfers.

38 Person benchmarks for persons aged 15 and over are estimates of the number of people in each state and territory by age and sex, the number of people in each state and the ACT by labour force status and the number of people in each state living in the capital city or the balance of the state.

39 A separate set of benchmarks is used for children under 15, since there are not individual person records for them in the survey. Information about children is recorded on household records, however, and benchmarks for the number of children aged 0-4 and aged 5-14 are used for each state and territory.

40 Numbers of households are calibrated to benchmarks for total Australia with respect to household composition (based on the number of adults (1, 2 or 3) and whether or not the household contains children).

41 The person and household benchmarks are based on estimates of numbers of persons and households in Australia. The benchmarks are adjusted to include persons and households residing in private dwellings only and therefore do not, and are not intended to, match estimates of the Australian resident population published in other ABS publications.

42 The fourth type of benchmark relates to income from social security transfers, and is only used for 1999-2000 and 2000-01. The benchmark was introduced for those years because, without it, the survey estimates of income from government benefit cash transfers account for a declining proportion of aggregate social security payments reported by the Department of Family and Community Services and the Department of Veterans' Affairs. Extensive investigations could not identify any specific reasons for the decline, indicating that it is likely to be associated with differences between the characteristics of people who respond to the survey and the characteristics of those who do not respond. This type of problem is sometimes called non-response bias, and introducing additional benchmarks is a means of addressing it. The benchmark introduced in this case ensured that the survey estimate of government benefit cash transfers is maintained at a proportion of aggregate benefit cash transfers that is consistent with the proportion achieved between 1994-95 and 1997-98. More detail of the investigations that led to the introduction of this benchmark is provided in Appendix 4.

Estimation

43 Estimates produced from the survey are usually in the form of averages (e.g. mean weekly income of couples with dependent children), or counts (e.g. total number of households which own their dwelling or total number of persons living in households that own their own dwelling). For counts of households, the estimate is obtained by summing the weights of all households in the required group (e.g. those owning their own dwelling). For counts of persons, the household weights are multiplied by the number of persons in the household before summing. The SIHC collects data on the number of people, including

children, in each household but separate records with income and other detailed data are only collected for people 15 years and older. Therefore, counts of persons cannot be obtained by summing the weights of all persons.

44 Average income values are obtained in two different ways, depending on whether mean gross household income or mean equivalised disposable household income is being derived. Estimates of mean gross household income are obtained by multiplying the gross income of each household by the weight of the household, summing across all households, and then dividing by the estimated number of households. For example, the mean gross household income of couples with dependent children is the weighted sum of the gross income of each such household divided by the estimated number of those households. Estimates of mean equivalised disposable household income are obtained by multiplying the equivalised disposable income of each household by the number of people in the household (including children) and by the weight of the household, summing across all households, and then dividing by the estimated number of people in the population group. Appendix 2 illustrates the differences between mean gross household income calculated on a household weighted basis and mean equivalised disposable household income calculated on a person weighted basis.

Reliability of estimates

45 The estimates provided in this publication are subject to two types of error, non-sampling and sampling error.

Non-sampling error

46 Non-sampling error can occur whether the estimates are derived from a sample or from a complete collection. Major sources of non-sampling error include the following.

47 Non-sample error can arise through the inability to obtain data from all households included in the sample. Although adjustments are made for non-response bias, some bias may remain because of differences which exist between the characteristics of respondents and non-respondents.

48 There can also be errors in reporting on the part of both respondents and interviewers. Reporting errors may arise through inappropriate wording of questions, misunderstanding of what data are required, inability or unwillingness to provide accurate information, or mistakes in answers to questions.

49 Errors may also arise during processing of the survey data through mistakes in coding and data recording.

50 Non-sampling errors are difficult to measure in any collection. However, every effort is made to minimise these errors. In particular, the effect of the reporting and processing errors described above is minimised by careful questionnaire design, intensive training and supervision of interviewers, asking respondents to refer to records whenever possible and by extensive editing and quality control checking at all stages of data processing.

51 The error due to incomplete response is minimised by

- call-backs to all initially non-responding households in order to explain the importance of their cooperation to the survey
- adjustment to the weights allocated to the respondent households in order to allow for households with similar characteristics from which comprehensive data are not obtained.

Sampling error

52 The estimates are based on a sample of possible observations and are subject to sampling variability. The estimates may therefore differ from the figures that would have been produced if information had been collected for all households. A measure of the sampling error for a given estimate is provided by the standard error, which may be expressed as a percentage of the estimate (relative standard error). Further information on sampling error is given in Appendix 3.

ACKNOWLEDGMENT

53 ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated: without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the **Census and Statistics Act 1905**.

STANDARD PRODUCTS

54 This publication, also available as a pdf file from the ABS web site (for a fee), provides a summary of the income related data available from the Survey of Income and Housing Costs. In addition to selected text and tabular information provided as main features on the ABS web site <https://www.abs.gov.au> free of charge, a range of additional products and services are also available. All of the tables in the main body of this publication are available, for a fee, as spreadsheets from the ABS web site (from the homepage see Statistical Products and Services, Data Cubes, Consumer income and expenditure, 6523.0). The data cubes under 6523.0 also include tables of RSEs provided (free of charge) for each publication table. Additional tables will be loaded to the website, including tables of counts relating to publication tables of proportions, as well as more detailed dissections, such as by age of persons in the household, and additional classifications. The additional tables will be released as product number 6532.0.55.001 and noted under Information on Releases on the website.

SPECIAL DATA SERVICES

55 The ABS offers specialist consultancy services to assist clients with more complex statistical information needs. Clients may wish to have the unit record data analysed according to their own needs, or require tailored tables produced incorporating data items and populations as requested by them. Tables and other analytic outputs can be made available electronically or in printed form. However, as the level of detail or disaggregation increases with detailed requests, the number of contributors to data cells decreases. This may result in some requested information not being able to be released due to confidentiality or sampling variability constraints. All specialist consultancy services attract a service charge, and clients will be provided with a quote before information is supplied. For further information, contact ABS information consultants on 1300 135 070.

UNIT RECORD FILE

56 It is expected that a confidentialised unit record file (CURF) from the 2000-01 SIHC will

be released on CD-ROM early in August 2003. It is also expected that a more detailed SIHC CURF will be available through the ABS Remote Access Data Laboratory later in 2003. CURFs on CD-ROM for 1994-95 to 1999-2000, incorporating the revised demographic benchmarking and new household level items will be released in August 2003. A full range of up-to-date information about the availability of ABS CURFs and about applying for access to CURFs is available via the ABS web site <https://www.abs.gov.au> (see Products and Services, Access to ABS CURFs). Inquiries to the ABS CURF Management Unit should email: intermediary.management@abs.gov.au, or telephone (02) 6252 5731.

RELATED PUBLICATIONS

57 Users may wish to refer to the following ABS products which relate to income:
Government Benefits, Taxes and Household Income, Australia, 1998-99, cat. no. 6537.0
Household Expenditure Survey, Australia: User Guide, 1998-99, cat. no. 6527.0, available free of charge from the ABS web site
Household Expenditure Survey, Australia: Summary of Results, 1998-99, cat. no. 6530.0
Household Expenditure Survey, Australia: Detailed Expenditure Items, 1998-99, cat. no. 6535.0
Housing Occupancy and Costs, Australia, 1997-98, cat. no. 4130.0
Labour Force, Australia, cat. no. 6203.0-issued monthly
Survey of Income and Housing Costs and Amenities: Income Units, Australia, 1990, cat. no. 6523.0
Survey of Income and Housing Costs, Australia: User Guide, 1997, cat. no. 6553.0
Average Weekly Earnings, Australia-Preliminary, cat. no. 6301.0-issued quarterly
Measuring Wellbeing: Frameworks for Australian Social Statistics, 2001, cat. no. 4160.0
Measuring Australia's Progress, 2002, cat. no. 1370.0

58 Users may also wish to refer to the following non-ABS products which relate to income:
Taxation Statistics 2000-01, A summary of taxation, superannuation and child support statistics (Australian Taxation Office)
Occasional Paper No. 1: Income support and related statistics: a 10-year compendium, 1989-1999 (Department of Family and Community Services)

Glossary

Benefit transfers

See government pensions and allowances.

Capital cities

Australia's six State capital city statistical divisions. For the Northern Territory and Australian Capital Territory the estimates relate predominantly to urban areas.

Couple, one family household

One family household consisting of:

- one couple only
- one couple, with their dependent and/or non-dependent children only
- one couple, with or without children, plus other relatives
- one couple, with or without children and other relatives, plus unrelated individuals.

Couple

Two people in a registered or de facto marriage, who usually live in the same household.

Decile

Groupings that result from ranking all households or people in the population in ascending order according to some characteristic such as their household income and then dividing the population into 10 equal groups, each comprising 10% of the estimated population.

Dependent children

All persons aged under 15 years; and people aged 15-24 years who are full-time students, have a parent in the household and do not have a partner or child of their own in the household.

Disposable income

Gross income after income tax and the Medicare levy are deducted. Income tax and the Medicare levy are imputed based on each person's income and other characteristics as reported in the survey. Disposable income is sometimes referred to as net income.

Earners

Persons (excluding dependent children) who receive income from wages or salaries, who are engaged in their own business or partnership, or are silent partners in a business or partnership.

Employed persons

Persons aged 15 years and over who, during the week before the interview:

- worked one hour or more for pay, profit, commission or payment in kind in a job or business, or on a farm (includes employees, employers and own account workers)
- worked one hour or more, without pay, in a family business or on a family farm
- had a job, business or farm but was not at work because of holidays, sickness or other reason.

Employee

An employed person who, for most of his/her working hours:

- works for a public or private employer and receives remuneration in wages or salary, or is paid a retainer fee by his/her employer and works on a commission basis, or works for an employer for tips, piece-rates or payment in kind
- operates his or her own incorporated enterprise with or without hiring employees.

Employer

A person who operates his or her own unincorporated economic enterprise or engages independently in a profession or trade, and hires one or more employees.

Equivalised disposable household income

Disposable household income adjusted using an equivalence scale. For a lone person household it is equal to disposable household income. For a household comprising more than one person, it is an indicator of the disposable household income that would need to be received by a lone person household to enjoy the same level of economic wellbeing as the household in question. For further information see Appendix 2.

Family

Two or more people, one of whom is at least 15 years of age, who are related by blood, marriage (registered or de facto), adoption, step or fostering, and who usually live in the same household. A separate family is formed for each married couple, or for each set of parent-child relationships where only one parent is present.

Full-time employed

Employed persons who usually work 35 hours or more a week (in all jobs).

Full-time student

A person 15 years or over who is classified as a full-time student by the institution they attend, or considers himself/herself to be a full-time student. Full-time study does not preclude employment.

Gini coefficient

A summary measure of inequality of income distribution. For further information see Appendix 1.

Government pensions and allowances/Government cash benefits

Regular, recurring receipts from government to persons under social security and related government programs. Included are pensions and allowances received by aged, disabled, unemployed and sick persons, families and children, veterans or their survivors, and study allowances for students. Sometimes referred to as government benefit transfers. All overseas pensions and benefits are included here, although some may not be paid by overseas governments.

Gross income

Regular cash receipts before income tax or the Medicare levy are deducted.

Group household

A household consisting of two or more unrelated people where all people are aged 15 years and over. There are no reported couple relationships, parent-child relationships or other blood relationships in these households.

Household

A group of related or unrelated people who usually live in the same dwelling and make common provision for food and other essentials of living; or a lone person who makes provision for his or her own food and other essentials of living without combining with any other person. Lodgers who receive accommodation only (not meals) are treated as a separate household. Boarders who receive accommodation and meals, are treated as part of the household.

Household composition

Classifies households into three broad groupings based on the number of families present (one family, multiple family and non-family). One family households are further disaggregated according to the type of family (such as couple family or one parent family) and according to the number of dependent and non-dependent children, other relatives and unrelated individuals present. Non-family households are disaggregated into lone person households and group households.

Income

Regular and recurring cash receipts including moneys received from wages and salaries, government pensions and allowances, and other regular receipts such as superannuation, workers' compensation, child support, scholarships, profit or loss from own unincorporated business or partnership and investment income. Gross income is the sum of the income from all these sources before income tax or the Medicare levy are deducted. Other measures of income are disposable income and equivalised disposable income.

Income unit

One person or a group of related persons within a household, whose command over income is assumed to be shared. Income sharing is assumed to take place within married (registered or de facto) couples, and between parents and dependent children. The income unit was the unit of analysis used in the 1994-95 to 1999-2000 issues of this publication, but the current issue uses the person as the unit of analysis with persons mostly described according to the characteristics of the household to which they belong.

Labour force status

Classifies all people aged 15 years and over according to whether they were employed, unemployed or not in the labour force.

Landlord type

For renters, the type of entity to whom rent is paid or with whom the tenure contract or arrangement is made. Renters belong to one of the following categories:

- state/territory housing authority-where the household pays rent to a state or territory housing authority or trust
- private landlords-where the household pays rent to a real estate agent or to another person not in the same household
- other-where the household pays rent to the owner/manager of a caravan park, an employer (including a government authority), a housing cooperative, a community or church group, or any other body not included elsewhere.

Lone person household

A household consisting of a person living alone.

Mean income

The total income received by a group of units divided by the number of units in the group. For more detail about household weighted and person weighted means, see Appendix 1.

Median income

That level of income which divides the units in a group into two equal parts, one half having incomes above the median and the other half having incomes below the median. For more detail about household weighted and person weighted medians, see Appendix 1.

Negative income

Income may be negative when a loss accrues to a household as an owner or partner in unincorporated enterprises or rental properties. Losses occur when operating expenses and depreciation are greater than gross receipts.

Non-family household

Consists of unrelated people only. A non-family household can be either a person living alone or a group household.

Not in the labour force

Persons not in the categories employed or unemployed as defined.

One family household

A household containing only one family. Unrelated individuals may also be present.

One parent, one family household

A one family household comprising a lone parent with at least one dependent or non-dependent child. The household may also include other relatives and unrelated individuals.

Other family household

A household with an extended family (e.g. grandparents, parents and children); and a household with multiple families.

Other income

Income other than wages and salaries, own business or partnership income and government pensions and allowances. This includes income received as a result of ownership of financial assets (interest, dividends), and of non-financial assets (rent, royalties) and other regular receipts from sources such as superannuation, child support, workers' compensation and scholarships. Income from rent is net of operating expenses and depreciation and may be negative when these are greater than gross receipts.

Other landlord type

Where the household pays rent to the owner/manager of a caravan park, an employer

(including a government authority), a housing cooperative, a community or church group, or any other body not included elsewhere.

Other tenure type

A household which is not an owner, a purchaser or a renter.

Own account worker

A person who operates his or her own unincorporated economic enterprise or engages independently in a profession or trade and hires no employees.

Own unincorporated business income

The profit/loss that accrues to persons as owners of, or partners in, unincorporated enterprises. Profit/loss consists of the value of gross output of the enterprise after the deduction of operating expenses (including depreciation). Losses occur when operating expenses are greater than gross receipts and are treated as negative income.

Owner (of dwelling)

A household in which at least one member owns the dwelling in which it usually resides. Owners are divided into two classifications-owners without a mortgage and owners with a mortgage. If there is any outstanding mortgage or loan secured against the dwelling the household is an owner with a mortgage. If there is no mortgage or loan secured against the dwelling the household is an owner without a mortgage.

Percentile

When all households or people in the population are ranked from the lowest to the highest on the basis of some characteristic such as their household income, they can then be divided into equal sized groups. Division into 100 groups gives percentiles. The highest value of the characteristic in the tenth percentile is denoted P10. The median or the top of the 50th percentile is denoted P50. P20, P80 and P90 denote the highest values in the 20th, 80th and 90th percentiles. Ratios of values at the top of selected percentiles, such as P90/P10, are often called percentile ratios.

Principal source of income

That source from which the most positive income is received. If total income is nil or negative the principal source is undefined.

Private income

Regular, recurring receipts from private organisations, including superannuation, regular workers' compensation, income from annuities, interest, dividends, royalties, income from rental properties, private scholarship and child support.

Quintiles

Groupings that result from ranking all households or people in the population in ascending order according to some characteristic such as their household income and then dividing the population into five equal groups, each comprising 20% of the estimated population.

Ratio of household incomes at top of selected income percentiles

See percentile.

Reference person

The reference person for each household is chosen by applying, to all household members aged 15 years and over, the selection criteria below, in the order listed, until a single appropriate reference person is identified:

- the person with the highest tenure when ranked as follows: owner without a mortgage, owner with a mortgage, renter, other tenure
- one of the partners in a registered or de facto marriage, with dependent children
- one of the partners in a registered or de facto marriage, without dependent children
- a lone parent with dependent children
- the person with the highest income
- the eldest person.

For example, in a household containing a lone parent with a non-dependent child, the person with the highest tenure will become the reference person. If the non-dependent child is an owner with a mortgage and the lone parent lives in the dwelling rent free, the non-dependent child will become the reference person. If both individuals have the same tenure, the one with the higher income will become the reference person. However, if both individuals have the same income, the elder will become the reference person.

Renter

A household which pays rent to reside in the dwelling. See further classification by Landlord type.

Tenure type

The nature of a household's legal right to occupy the dwelling in which the household members usually reside. Tenure is determined according to whether the household owns the dwelling outright, owns the dwelling but has a mortgage or loan secured against it, is paying rent to live in the dwelling or has some other arrangement to occupy the dwelling.

Unemployed persons

Persons aged 15 years and over who were not employed during the week before the interview and

- had actively looked for full-time or part-time work at any time in the four weeks before the interview and:
    - were available for work in the week before the interview, or would have been available except for temporary illness (i.e. lasting for less than four weeks before interview), or
    - were waiting to start a new job within four weeks from the interview and would have started in the week before the interview if the job had been available then

or

- were waiting to be called back to a full-time or part-time job from which they had been stood down without pay for less than four weeks before the interview for reasons other

than bad weather or plant breakdown.

Unincorporated business

A business in which the owner(s) and the business are the same legal entity, so that, for example, the owner(s) are personally liable for any business debts that are incurred.

Wages and salaries

The gross cash income received as a return to labour from an employer or from a person's own incorporated business.

Appendix

APPENDIX 1 - ANALYSING INCOME DISTRIBUTION

INTRODUCTION

There are many ways to illustrate aspects of the distribution of income and to measure the extent of income inequality. In this publication, five main types of indicator are used-means and medians, frequency distributions, percentile ratios, income shares, and Gini coefficients. This Appendix describes how these indicators are derived.

MEAN AND MEDIAN

Mean household income (average household income) and median household income (the midpoint when all persons or households are ranked in ascending order of household income) are simple indicators that can be used to show income differences between subgroups of the population. Many tables in this publication include mean household income and median household income data.

In most cases, the income measure used is equivalised disposable household income. As described in Appendix 2, equivalised disposable household income can be viewed as an indicator of the economic resources available to each member of a household. In this publication, therefore, the mean and median values of equivalised disposable household income are always calculated with respect to the relevant number of persons, even where the table is describing households. Measures calculated in this way are sometimes known as person weighted measures. The method of calculation is described under 'Estimation' in the Explanatory Notes.

In some tables describing households, the mean and median of gross household income are also shown. These measures are calculated with respect to the relevant number of households, not persons. They are sometimes known as household weighted measures.

FREQUENCY DISTRIBUTION

A frequency distribution illustrates the location and spread of income within a population. It groups the population into classes by size of household income and gives the number or

proportion of people in each income range. A graph of the frequency distribution is a good way to portray the essence of the income distribution. The first graph in the Summary of Findings shows the proportion of people within $50 household income ranges.

Frequency distributions can provide considerable detail about variations in the income of the population being described, but it is difficult to describe the differences between two frequency distributions. They are therefore often accompanied by other summary statistics, such as the mean and median. Taken together, the mean and median can provide an indication of the shape of the frequency distribution. As can be seen in the first graph in the Summary of Findings, the distribution of income tends to be asymmetrical, with a small number of people having relatively high household incomes and a larger number of people having relatively lower household incomes. The greater the asymmetry, the greater will be the difference between the mean and the median.

QUANTILE MEASURES

When persons (or any other units) are ranked from the lowest to the highest on the basis of some characteristic such as their household income, they can then be divided into equally sized groups. The generic term for such groups is quantiles.

Quintiles, deciles and percentiles

When the population is divided into five equally sized groups, the quantiles are called quintiles. If there are 10 groups, they are deciles, and division into 100 groups gives percentiles. Thus the first quintile will comprise the first two deciles and the first 20 percentiles.

This publication frequently presents data classified into income quintiles, supplemented by data relating to the 2nd and 3rd deciles. The latter is included to enable quintile style analysis to be carried out without undue impact from very low incomes which may not accurately reflect levels of economic wellbeing (see paragraph 19 in the Explanatory Notes).

Equivalised disposable household income is the income measure used to define the quantiles shown in this publication, and the quantiles each comprise the same number of persons, that is, they are person weighted.

Upper values and medians

In some analyses, the statistic of interest is the boundary between quantiles. This is usually expressed in terms of the upper value of a particular percentile. For example, the upper value of the first quintile is also the upper value of the 20th percentile and is described as P20. The upper value of the ninth decile is P90. The median of a whole population is P50, the median of the 3rd quintile is also P50, the median of the first quintile is P10, etc.

Percentile ratios

Percentile ratios summarise the relative distance between two points on the income distribution. To illustrate the full spread of the income distribution, the percentile ratio needs to refer to points near the extremes of the distribution, for example, the P90/P10 ratio. The P80/P20 ratio better illustrates the magnitude of the range within which the incomes of the majority of the population fall. The P80/P50 and P50/P20 ratios focus on comparing the ends of the income distribution with the midpoint.
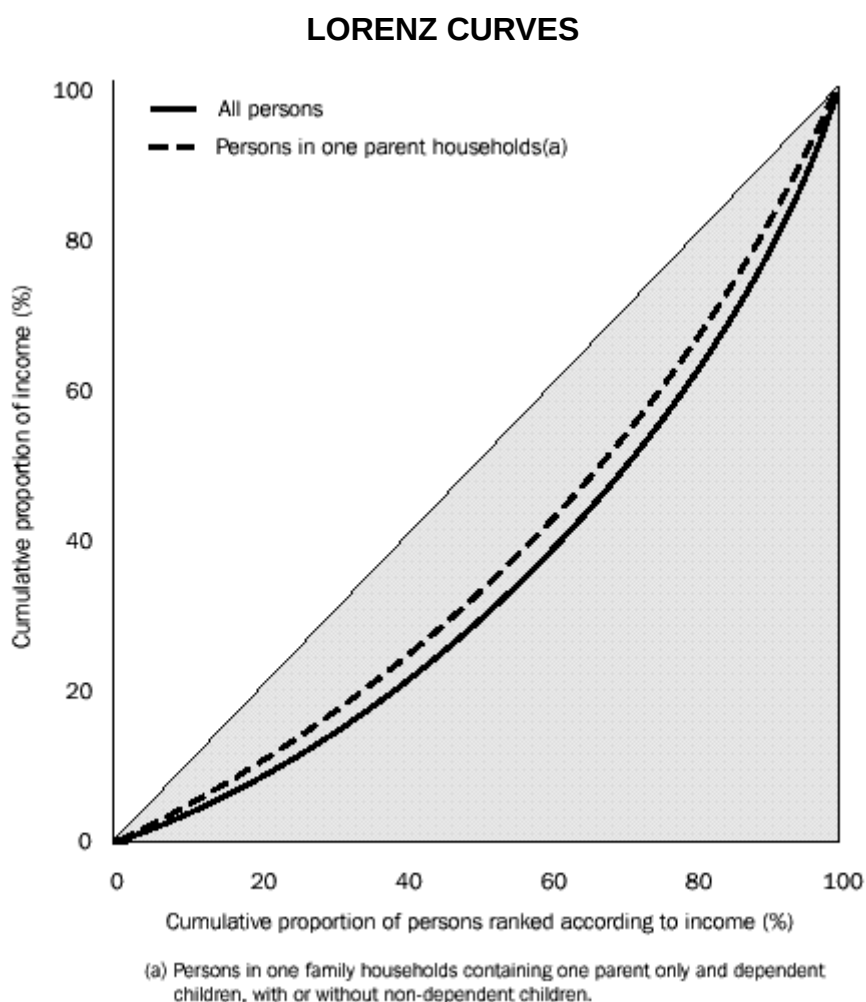
Income share

Income shares can be calculated and compared for each income quintile (or any other subgrouping) of a population. The aggregate income of the units in each quintile is divided by the overall aggregate income of the entire population to derive income shares.

GINI COEFFICIENT

The Gini coefficient is a single statistic which summarises the distribution of income across the population. Person weighted coefficients are used in this publication.

The Gini coefficient can best be described by reference to the Lorenz curve. The Lorenz curve is a graph with horizontal axis showing the cumulative proportion of the persons in the population ranked according to household income and with the vertical axis showing the corresponding cumulative proportion of equivalised disposable household income. The graph then shows the income share of any selected cumulative proportion of the population, as can be seen below.

LORENZ CURVES

(a) Persons in one family households containing one parent only and dependent children, with or without non-dependent children.

If income were distributed evenly across the whole population, the Lorenz curve would be the diagonal line through the origin of the graph. The Gini coefficient is defined as the ratio of the area between the actual Lorenz curve and the diagonal (or line of equality) and the total area under the diagonal. The Gini coefficient ranges between zero when all incomes are equal and one when one unit receives all the income, that is, the smaller the Gini coefficient the more even the distribution of income.

Normally the degree of inequality is greater for the whole population than for a subgroup

within the population because subpopulations are usually more homogeneous than full populations. This is illustrated in the graph above, which shows two Lorenz curves from the 2000-01 Survey of Income and Housing Costs. The Lorenz curve for the whole population of the survey is further from the diagonal than the curve for persons living in one family households that contain one parent only and dependent children (they may also contain other children). Correspondingly, the calculated Gini coefficient for all persons was 0.311 while the coefficient for the persons in the one parent households included here was 0.259.

Equivalised Disposable Household Income (Appendix)

APPENDIX 2 - EQUIVALISED DISPOSABLE HOUSEHOLD INCOME

EQUIVALENCE SCALES

Equivalence scales have been devised to make adjustments to the actual incomes of households in a way that enables analysis of the relative wellbeing of households of different size and composition. For example, it would be expected that a household comprising two people would normally need more income than a lone person household if the two households are to enjoy the same standard of living.

One way of adjusting for this difference in household size might be simply to divide the income of the household by the number of people within the household so that all income is presented on a per capita basis. However, such a simple adjustment assumes that all individuals have the same resource needs if they are to enjoy the same standard of living and that there are no economies derived from living together.

Various calibrations, or scales, have been devised to make adjustments to the actual incomes of households in a way that recognises differences in the needs of individuals within those households and the economies that flow from sharing resources. The scales differ in their detail and complexity but commonly recognise that the extra level of resources required by larger groups of people living together is not directly proportional to the number of people in the group. They also typically recognise that children have fewer needs than adults.

When household income is adjusted according to an equivalence scale, the equivalised income can be viewed as an indicator of the economic resources available to a standardised household. For a lone person household it is equal to household income. For a household comprising more than one person, it is an indicator of the household income that would need to be received by a lone person household to enjoy the same level of economic wellbeing as the household in question.

Alternatively, equivalised household income can be viewed as an indicator of the economic resources available to each individual in a household. The latter view underpins the calculation of income distribution measures based on numbers of people, rather than numbers of households.

CHOICE OF SCALE

While there has been considerable research by statistical and other agencies trying to estimate appropriate values for equivalence scales, no single standard has emerged. In

theory, there are many factors which might be taken into account when devising equivalence scales, such as recognising that people in the labour force are likely to face transport and other costs that do not contribute to their standard of living. It might also be desirable to reflect the different needs of children at different ages, and the different cost levels faced by people living in different geographic areas. On the other hand, the tastes and preferences of people vary widely, resulting in markedly different expenditure patterns between households with similar income levels and similar composition. Furthermore, it is likely that equivalence scales that appropriately adjust incomes of low income households are not as appropriate for higher income households, and vice versa. This is because the proportion of total income spent on housing tends to fall as incomes rise, and cheaper per capita housing is a major source of economies of scale that flow from people living together.

It is therefore difficult to define, estimate and use equivalence scales which take all relevant factors into account. As a result, analysts tend to use simple equivalence scales which are chosen subjectively but are nevertheless consistent with the quantitative research that has been undertaken. A major advantage of simpler scales is that they are more transparent to the user, that is, it is easier to evaluate the assumptions being made in the equivalising process.

In this issue of this publication, the 'modified OECD' equivalence scale is used. In previous issues, two other measures of equivalised income, the 'original OECD' scale and the Henderson scale, had been provided but they are no longer in common use. The 'modified OECD' equivalence scale has been used in more recent research work undertaken for the OECD, has wide acceptance among Australian analysts of income distribution, and is the stated preference of key SIHC users.

A comparison of equivalence scales will be provided later in 2003 on the ABS web site <https://www.abs.gov.au> (see Themes, Economic Wellbeing of Households, Methodological and Analytical Articles).

DERIVATION OF EQUIVALISED INCOME

Equivalised income is derived by calculating an equivalence factor according to the chosen equivalence scale, and then dividing income by the factor.

The equivalence factor derived using the 'modified OECD' equivalence scale is built up by allocating points to each person in a household. Taking the first adult in the household as having a weight of 1 point, each additional person who is 15 years or older is allocated 0.5 points, and each child under the age of 15 is allocated 0.3 points. Equivalised household income is derived by dividing total household income by a factor equal to the sum of the equivalence points allocated to the household members. The equivalised income of a lone person household is the same as its unequivalised income. The equivalised income of a household comprising more than one person lies between the total value and the per capita value of its unequivalised income.

In previous issues of this publication, the equivalence factors were standardised so that a household comprising two adults and two children had a factor value of one. Smaller households then had a factor of less than one and larger households a factor of greater than one. However, standardising the factors so that a lone person household has a factor of one and all other households types have factors greater than one, as is done in this issue of this publication, reinforces the understanding that equivalised household income is an indicator of the economic resources available to each member of a household. It can therefore be used for comparing the situation of individuals as well as comparing the situation of households.

When unequivalised income is negative, such as when losses incurred in a household's unincorporated business or other investments are greater than any positive income from any other sources, then equivalised income has been set to zero.

GROSS INCOME AND EQUIVALISED DISPOSABLE INCOME

The SIHC collects data on households' gross income. However, disposable income, that is, gross income less the value of income tax and Medicare levy to be paid on the gross income, is a better indicator of the resources available to a household to maintain its standard of living. Therefore, for this publication, estimates of income tax payable on gross income reported in the SIHC are made by means of a tax model. The tax and Medicare estimates are subtracted from gross income to give disposable income, and the equivalence factors are applied to the estimates of disposable income. Person weighted measures of income distribution are then derived from the estimates of equivalised disposable household income. (Appendix 1 describes the difference between person weighted and household weighted measures.)

Means and medians of both gross income and equivalised disposable income are shown in some tables in this publication to allow users to see the differences between data as collected and data as standardised to facilitate income distribution analysis. The following table shows the differences in income measures when calculated from data at different stages in the progression from gross household income to person weighted equivalised disposable household income.

A1 FROM GROSS INCOME TO PERSON WEIGHTED EQUIVALISED DISPOSABLE INCOME

		Gross household income per week	Income tax per week	Disposable household income per week	EQUIVALISED DISPOSABLE HOUSEHOLD INCOME PER WEEK	
					Household weighted	Person weighted
Percentile boundaries and percentile ratios						
P10	$	212	na	212	196	202
P20	$	334	na	332	229	245
P50	$	773	na	671	403	414
P80	$	1,450	na	1,169	656	644
P90	$	1,902	na	1,484	816	802
P90/P10	ratio	8.97	na	4.47	4.15	3.97
P80/P20	ratio	4.34	na	3.52	2.86	2.63
Means						
All households	$	972	181	791	464	469
Household composition						
Couple, one family households						
Couple only	$	929	163	766	512	512
Couple with dependent children only	$	1,280	282	998	464	453
Other couple, one family households	$	1,619	304	1,315	549	537
One parent, one family households with dependent children	$	643	69	574	334	329
Other family households	$	1,137	177	960	485	490
Non-family households						

Lone person households	$	456	72	384	388	388
Group households	$	1,192	231	961	602	592

na not available

The first column in the table shows measures calculated from gross household income, as collected in the SIHC. The next column shows estimates of income tax to be paid on gross income, with the third column giving the resultant disposable household income.

Individuals with higher incomes will normally be expected to pay higher income tax than individuals with lower incomes, but this relationship is not as strong for households. A household with relatively high income may comprise only one individual with high income or it may include a number of individuals with relatively low income. The disposable income in the first situation will be lower than that in the second situation, and will result in a reranking of the households in the formation of percentiles. Therefore a household may fall into a different percentile in an analysis of disposable income compared to an analysis of gross income.

As would be expected, the difference between disposable income and gross income increases as income levels increase. At the upper boundary of the tenth percentile (P10), there is no difference at all, that is, the income tax to be paid by households with the lowest levels of gross income is negligible. In contrast, there is nearly $400 per week difference between the P90 value for gross household income and the P90 value for disposable household income.

The fourth and fifth columns of the table show measures calculated from equivalised disposable household income. When household weighted, the percentiles and means are calculated with respect to the numbers of households concerned. When person weighted, they are calculated with respect to the numbers of people within households. While the ranking underlying the formation of percentiles is the same for the two income measures, the boundaries between the percentiles differ because household weighted percentile boundaries create subgroups with equal numbers of households while person weighted percentile boundaries create subgroups with equal numbers of persons. The extent to which the boundaries differ reflects the extent to which the average household size differs between percentiles.

The person weighted estimate of P10 ($202) is slightly higher than the household weighted estimate of P10 ($196). This implies that the households with the lowest rankings of equivalised disposable household income tend to comprise a lower than average number of persons. In other words, the 10% of people with the lowest income make up slightly more than the 10% of households with the lowest income.

For lone person households, the two measures of equivalised disposable income are the same as each other ($388) and are just a little higher than disposable income ($384). Equivalised disposable income for lone person households is approximately the same as disposable income, because the equivalising factor for such households is 1.0. The reason for the slight difference between them is that some households have negative disposable income and their values are reset to zero before equivalising is carried out.

For all other types of household composition, equivalised disposable income is lower than disposable income, since income is adjusted to reflect household size and composition. Mean equivalised disposable income for couple only households is the same for both the household weighted and the person weighted measures since there are always two and only two persons in such households. For most other multi-person households, person weighted mean income is lower than the household weighted mean. This implies that, within

each type, larger households tend to have lower equivalised household income.

Sampling Variability (Appendix)

APPENDIX 3 - SAMPLING VARIABILITY

INTRODUCTION

The estimates in this publication are based on information obtained from the occupants of a sample of dwellings. Therefore, the estimates are subject to sampling variability and may differ from the figures that would have been produced if information had been collected for all dwellings. One measure of the likely difference is given by the standard error (SE), which indicates the extent to which an estimate might have varied because only a sample of dwellings was included. There are about two chances in three that the sample estimate will differ by less than one SE from the figure that would have been obtained if all dwellings had been included, and about 19 chances in 20 that the difference will be less than two SEs. Another measure of the likely difference is the relative standard error (RSE), which is obtained by expressing the SE as a percentage of the estimate.

For estimates of population sizes, the size of the SE generally increases with the level of the estimate, so that the larger the estimate the larger the SE. However, the larger the sampling estimate the smaller the SE in percentage terms (RSE). Thus, larger sample estimates will be relatively more reliable than smaller estimates.

In the tables in this publication, only estimates with RSEs of 25% or less are considered reliable for most purposes. Estimates with RSEs greater than 25% but less than or equal to 50% are preceded by an asterisk (e.g. *3.4) to indicate they are subject to high SEs and should be used with caution. Estimates with RSEs of greater than 50%, preceded by a double asterisk (e.g. **0.3), are considered too unreliable for general use and should only be used to aggregate with other estimates to provide derived estimates with RSEs of 25% or less.

RSEs for all tables in this publication are available from 6523.0 Household Income and Income Distribution, Australia, 2000-01 - Data Cubes. RSEs for table 1 are included as table A2 below. The RSEs have been derived using the group jackknife method.

RSEs OF COMPARATIVE ESTIMATES

Proportions and percentages

Proportions and percentages, which are formed from the ratio of two estimates, are also subject to sampling errors. The size of the error depends on the accuracy of both the numerator and the denominator. For proportions where the denominator is an estimate of the number of households in a grouping and the numerator is the number of households in a sub-group of the denominator group, the formula for the RSE is given by

$$RSE\%\left(\frac{x}{y}\right) = \sqrt{[RSE\%(x)]^2 - [RSE\%(y)]^2}$$

Differences between estimates

The difference between survey estimates is also subject to sampling variability. An approximate SE of the difference between two estimates (x-y) may be calculated by the formula:

$$SE(x-y) = \sqrt{[SE(x)]^2 + [SE(y)]^2}$$

This approximation can generally be used whenever the estimates come from different samples, such as two estimates from different years or two estimates for two non-intersecting subpopulations in the one year. If the estimates come from two populations, one of which is a subpopulation of the other, the standard error is likely to be lower than that derived from this approximation, but there is no straightforward way of estimating how much lower.

A2 RELATIVE STANDARD ERRORS (%) FOR TABLE 1, INCOME DISTRIBUTION

Indicator	1994-95	1995-96	1996-97	1997-98	1999-2000	2000-01
Mean income per week						
Lowest quintile	1.5	1.0	1.7	1.3	1.6	1.5
Second quintile	0.9	0.6	0.8	0.8	0.9	1.0
Third quintile	1.0	0.9	0.6	0.7	1.0	0.7
Fourth quintile	0.6	0.9	0.7	0.6	1.0	0.8
Highest quintile	1.3	0.9	1.1	1.4	2.0	1.6
All households	0.7	0.6	0.6	0.6	1.1	0.8
Second and third deciles	0.7	0.8	0.8	1.0	1.1	1.0
Income per week at top of selected percentiles						
10th [P10]	0.8	1.1	1.1	0.8	1.0	1.0
20th [P20]	1.0	0.7	1.0	0.9	1.3	1.2
30th [P30]	1.1	0.8	0.9	0.6	1.0	1.2
40th [P40]	1.1	0.6	1.0	1.0	1.4	0.8
50th [P50]	1.0	1.2	0.6	1.0	1.2	0.9
60th [P60]	0.8	1.0	0.9	0.6	1.2	0.8
70th [P70]	0.7	1.0	0.9	0.7	1.0	0.7
80th [P80]	0.9	0.9	0.9	1.0	1.1	1.2
90th [P90]	0.9	0.8	1.1	0.8	1.3	1.1
Income share						
Lowest quintile	1.4	1.0	1.6	1.4	1.5	1.4
Second quintile	0.7	0.6	0.7	0.8	0.8	0.9
Third quintile	0.6	0.6	0.6	0.8	0.6	0.8
Fourth quintile	0.6	0.6	0.6	0.5	0.9	0.6
Highest quintile	0.8	0.6	0.7	0.9	1.1	1.0
All persons	-	-	-	-	-	-
Second and third deciles	0.8	0.8	0.8	0.8	1.0	0.9
Ratio of incomes at top of selected income percentiles						
P90/P10	1.5	1.9	1.7	1.4	1.9	1.5
P80/P20	1.2	1.2	1.7	1.5	1.8	1.9
P80/P50	0.9	1.3	1.3	1.6	1.1	1.4
P20/P50	1.2	1.3	1.2	1.4	1.5	1.8
Gini coefficient	1.2	0.9	1.2	1.4	1.5	1.4

- nil or rounded to zero(including null cells)

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Appendix

APPENDIX 4 - NEW BENEFIT TRANSFER BENCHMARK

INTRODUCTION

In compiling this publication, an unexpected and significant decline was observed in the coverage of government pensions and allowances (or cash benefit transfers) as an income source in the SIHC results. The problem was initially reported in the feature article titled 'Upgrading Household Income Distribution Statistics', published in the April 2002 issue of **Australian Economic Indicators** (cat. no. 1350.0). This Appendix describes the results of the investigations undertaken and the steps taken to resolve the problem.

As identified in the April 2002 article, the 'coverage' of benefit transfers in the 1999-2000 SIHC had fallen significantly, to 81% of the aggregate totals published by the Department of Family and Community Services (FaCS) and the Department of Veterans' Affairs (DVA). In the four SIHC surveys to 1997-1998 coverage had been relatively stable at around 85%. Benefit transfers coverage in the then yet to be published 2000-01 SIHC data had fallen further, to 78%. If the lower coverage of SIHC benefit transfers largely related to missing payments made predominantly to households represented in the lowest two income quintiles, the change in understatement would have impacted very significantly on several of the measures used to assess income inequality.

UNDERCOVERAGE OF BENEFIT TRANSFERS

Population scope

The SIHC does not attempt to capture all benefit transfers. The scope of the SIHC is restricted to urban and rural areas of Australia, excluding remote and sparsely settled areas of the Northern Territory, and includes only the usual residents of private dwellings, such as houses, flats, units, caravans, tents and other private structures that are places of usual residence at the time of interview. Persons living in non-private dwellings, such as hotels, boarding schools, nursing homes and other institutions, are excluded. Persons residing abroad and receiving Australian government benefit transfers are also excluded from the scope of the SIHC.

Underreporting

The SIHC fails to collect some benefit payments that are made to people in scope of the survey. In some cases, respondents fail to report all their income, including government benefits. Respondents are asked to report the latest amount received as benefit transfers. These amounts are likely to be reported in SIHC, at least in part, as the net cash transfers usually received by the respondent. Amounts that are deducted at source, such as tax, rent or other regular commitments for which arrangements have been made for automatic deduction by Centrelink, may be excluded by some respondents. Amounts that are received less frequently than fortnightly, such as a quarterly telephone allowance, may also be excluded. Respondents may also fail to report all their income for a variety of other reasons, such as privacy concerns, difficulties in remembering income details, and unwillingness to reveal fraudulent or other illegal activity.

Non-response bias

Survey results are expanded to estimates for the whole population by applying weights to survey responses. In calculating the weight to be applied to each respondent, benchmarking procedures are used to ensure that the expanded estimates are consistent with the demographic characteristics of the population as established by Population Censuses and intercensal demographic estimates. It is then assumed that survey respondents are representative of all people in the population.

While demographic benchmarking ensures consistency for certain demographic characteristics, this may not be the case for other characteristics being collected in the survey, such as income and source of income. The most problematic aspect is the extent to which survey respondents may differ from people who reside in dwellings selected in the survey but from whom responses were not obtained. Such differences are called non-response bias. Non-response bias may result in undercoverage or overcoverage in final survey estimates. In the case of the SIHC, aggregate estimates of total benefit transfers may therefore exhibit undercoverage or overcoverage because of non-response bias.

Undercoverage over time

The net effect of scope restrictions, incomplete reporting and the population benchmarking adopted, was a substantial but stable difference from 1994-95 to 1997-98 between aggregate government benefits estimated from the SIHC and aggregate benefits paid by government agencies. Variations from year to year were within the range expected to be associated with sampling error. Such undercoverage of real world income flows to households impacts on other sources of income in similar ways. The extent of undercoverage of each income source will affect the estimation of household income levels and the measurement of income distribution at any point in time. As long as undercoverage is relatively stable over time, the impact on measuring changes in income and its distribution will be limited.

However, benefit transfers coverage declined significantly over the two SIHC cycles after 1997-98, as can be seen in the top segment of table A3. If the increased SIHC undercoverage was due to reporting error by individuals, or processing error, or a real world change not captured in individual reporting through SIHC methodology, there was the potential for significant misrepresentation of the changes in income distribution in Australia. In addition, analysis by life cycle groups was likely to be affected by such a major omission of one income source that is more significant to certain groups.

INVESTIGATING WELFARE TRANSFERS ESTIMATION

A number of different avenues have been investigated in seeking to understand and correct for the decline in benefit transfers coverage. These include possible systems errors, appropriateness of the coverage comparison being made between aggregate SIHC estimates and aggregate benefits paid by government agencies, changes in the way that benefit transfers are made which might not be captured in the SIHC, changes in the quality of reporting by households, and options for and appropriateness of the weighting methods used to compile aggregate results.

Processing error

The SIHC processing system had been relatively stable since its inception in 1994-95. A review of the system did not identify either any system changes that might only have impacted on 1999-2000 and 2000-01 benefit transfers estimates, or systems errors that

might only be reflected systematically only in estimates for the most recent two survey cycles.

Coverage comparison between SIHC estimates and aggregate benefits paid by government agencies

Because of the audit scrutiny associated with government outlays, there is little likelihood of significant error in the published aggregate benefit amounts. It was possible that changes in the nature of accounting for the expenditures, changes in the population composition of benefit recipients, or changes in the way that recipients were provided with their benefits may have impacted on the validity of the coverage analysis being undertaken. However, ABS investigations showed that a stable relationship could be expected, over the period 1994-95 to 2000-01, between SIHC measures of benefit transfers and the aggregate transfers values published by the Departments of Family and Community Services and Veterans' Affairs because:

- the proportion of benefit recipients in special dwellings or overseas had been stable over the period when SIHC coverage declined
- while accrual accounting was introduced as the basis of compilation for published benefit transfer aggregates from 1998-99, the nature of the changes were not such that they would have had an adverse impact on apparent SIHC coverage
- published aggregate transfer values only relate to benefits paid, and so do not include, for example, administrative costs which may have increased in recent years
- analysis of movements in selected aggregates, such as age pension payments, tracked announced changes in both benefit levels and eligibility criteria
- even if all affected respondents failed to include the value of the automatic deductions made on their behalf by Centrelink, such as tax or rent, the scale of the increase in such deductions was not sufficient to have a marked effect on the coverage ratios over the period under analysis.

There was one error identified through this analysis. Under the income concept used in the SIHC, the survey had failed to collect information about the one-off payment to seniors paid in 2000-01 to income support recipients who had reached age pension age. Correcting this error accounted for 1.1 percentage point of the 3.5 percentage point deterioration in coverage in that year, but does not account for any of the deterioration in 1999-2000.

In summary, except for the one-off payment to seniors, no errors were found in the process of comparing the SIHC benefit transfer estimates with published aggregates.

Misreporting by SIHC respondents (measurement error)

Possible causes for respondent error contributing to the declining coverage of benefit transfers reported in SIHC included:

- respondents increasingly understating the amount of benefit transfers that they receive
- respondents increasingly declining to acknowledge that they were recipients of benefit transfers, whether from a privacy perspective, from a desire to hide fraudulent activity, or otherwise.

To assess the accuracy of respondents' reporting, the benefits reported by individuals were compared to estimates of apparent benefit entitlements modelled on the basis of other reported information such as age, non-benefit income, and number of children. The analysis did not reveal any obvious decline in the average individual benefit level being reported relative to the apparent benefits entitlement. If a decline had been detected it might have

suggested an increasing tendency to understate the individual amounts received. Nor did this analysis identify any increase in people not reporting welfare transfers when they had no other significant sources of income. For example, the number of persons reporting that they received the age pension in SIHC was a constant proportion of the total number of persons in the SIHC sample who were of age pension age and also had little other income.

It is possible that persons who are not entitled to receive benefit transfers, perhaps because they receive other incomes, but nevertheless claimed and received benefits, do not report the fraudulently claimed benefit income to the ABS. While this possibility is plausible for some benefit types, no evidence of an increase in fraud was identified. And no plausible explanation was identified for fraud to be the cause of an across-the-board decline in coverage of all major pension types in 1999-2000, including age pensions, disability pensions and service pensions, nor why that level of fraud would accelerate in 2000-01.

In summary, although there may well be some misreporting by SIHC respondents, no evidence was found for any significant deterioration over the latest two years.

Differential undercoverage and demographic benchmarks

As with other household surveys, the estimation and weighting of SIHC includes a process of benchmarking to known demographic totals (i.e. population totals of people and households, classified by age, sex, state, etc.). One of the reasons to benchmark a survey is to maximise the extent to which the survey results represent the full population being surveyed. Subgroups that responded less well to the survey are therefore given larger weights than subgroups that responded more fully. However, if non-respondents differ from respondents in characteristics other than those being benchmarked, survey estimates are still subject to non-response bias.

There were several indicators that the impact of non-response on the SIHC is changing and the profile of survey respondents is becoming less representative of that of non-respondents. As a result, the SIHC estimation methodology may not have been fully effective in accommodating changing non-response patterns, leaving the potential for bias in the coverage of incomes that might result. These indicators were:

- SIHC response rates that had been relatively stable at about 90% over the period 1994-95 to 1997-98, but slipped to 85% from 1999-2000, the first year of the decline in benefit transfer coverage
- an apparent and significant over-representation of children in the weighted SIHC results, indicating that households with children were more likely to respond in the SIHC than households without children
- the across-the-board nature of the decline in coverage of benefits suggested that weighting to demographic benchmarks was not fully compensating for differential undercoverage in the sample responses.

Various demographic benchmarking options were analysed in trying to deal with the range of representational dimensions required in SIHC results and adjusting for the undercoverage of different demographic sub-populations. While the varying combinations of benchmarks had some impact on the level of measured benefit transfers, the variations in results were usually within one standard error of each other (and at most within two standard errors) and did not offer a solution to the coverage gap. The range of benchmarking options also had virtually no impact on any of the usual summary measures of income distribution.

In summary, while the declining response rates may be associated with changing response patterns by different types of households, it is not something that can be corrected by

demographic benchmarking alone.

In arriving at the final SIHC demographic benchmarks used in the revised income distribution measures reported below, the main change has been to benchmark to the number of children in the age ranges of 0-4 years, and 5-14 years, by state. However, introducing this important improvement in benchmarking, and a desire to have an estimation regime consistent across all years, required the following benchmarks that had been previously applied to be foregone:

- quarterly and half yearly benchmarking
- state by household counts.

The removal of sub-annual benchmarking is not considered significant to the quality of the SIHC results. While state household counts have been removed from the benchmarking, a range of state benchmarks remain (age groups by sex, state by part of state, state by labour force status), the new state by children age groups benchmark has been introduced, and national household benchmarks remain.

BENCHMARKING TO BENEFIT TRANSFERS AGGREGATES

Following the investigation of the range of issues, discussed above, that could potentially contribute to the decline in SIHC coverage of benefit transfers, ABS concluded that the increasing SIHC undercoverage of benefit transfers resulted from an increase in the differential undercoverage of benefit recipients that could not be accommodated by demographic benchmarks alone. To directly address the undercoverage of benefit transfers the ABS has therefore introduced explicit benefit transfers benchmarks for the 1999-2000 and 2000-01 SIHC estimates. This is consistent with the general approach of benchmarking to address differential response rates and coverage deficiencies, such as not collecting data from certain geographic areas for which the populations are nevertheless incorporated in demographic benchmarks.

Several issues were considered in deciding how to benchmark to benefit transfers.

- Should benchmarking be to numbers of benefit recipients or to value of benefits paid?
- Should benchmarking be done at an aggregate level or by benefit type?
- Should benchmarking be to 100% of the FaCS/DVA values or some lower amount?

Numbers of benefit recipients or value of benefits paid?

It was decided to benchmark to value of benefits rather than to number of recipients, because the available data on value of benefits is more reliable. While the benchmarking process ensured consistency with respect to the value of benefits, the process achieved this by increasing the survey weights assigned to respondents reporting benefits and decreasing the weights of other respondents. In other words, the benchmarking process increased the estimated number of benefit recipients, and did not amend the values of individual respondents.

Aggregate level or by benefit type?

In theory, it would have been desirable to benchmark to income from individual benefits, or at least to income from broad groups of benefits, because the undercoverage has behaved differently for different benefit types over the years that SIHC has run.

However, it is known that there is some misclassification between the benefit types by respondents, such as Newstart received while ill being reported as sickness allowance. To compound the problem, the rules defining the boundary between the two have changed over time, and the degree of misclassification is likely to be greater now than in earlier years. There have also been other structural changes in benefits over time, such as youth allowance previously being part Newstart and part Austudy.

It is not possible to translate coverage rates between components in the old structure to accurately target coverage rates in the new structure, especially when dealing concurrently with both misclassification and changes in classification. Therefore attempting to benchmark to individual benefit types would imply a greater sense of accuracy than could be achieved. An analysis of the impacts of the two choices of benchmarks showed that there would be little difference between the two approaches in practice, and so it was decided to benchmark to the total income from benefits.

To 100% of the value paid by government agencies or some lower amount?

Options also exist on whether to benchmark to 100% of aggregate benefits that are within scope of SIHC, or to some lesser amount. For the early, apparently stable part of the series, the survey was accounting for about 85% of aggregate benefits. Some part of the difference is attributable to the scope differences, discussed earlier, although the exact amount is not known.

In theory, if there is no measurement error in the data, the remaining undercoverage could be removed by benchmarking the sample to the total amount of benefits. However, there may be significant differences between the benefit reported by respondents and the actual amount of benefit transfers paid to them by government agencies, and benchmarking may not be an appropriate means of addressing this problem.

Excluding the impact of the scope differences, the undercoverage is likely to result from a combination of misreporting, or measurement error, and a failure of the benchmarking process to completely account for the impact of rising differential undercoverage. While it has been concluded that increasing measurement error does not seem to be the cause of the decline in survey coverage of benefits in recent years, measurement error may well be a significant contributor to the 'base' amount of undercoverage through the whole period. Benchmarking is not an appropriate means of correcting for measurement error if the conceptual basis of the survey response is different from that of the benchmark aggregate.

Furthermore, SIHC estimates of income other than from benefit transfers are also likely to be affected by measurement error. Correcting just the benefit income for such deficiencies, by increasing the incomes of those at the lower end of the income distribution, would alter the apparent income distribution observed in the SIHC. But it is not possible at this time to determine whether such a change would increase or decrease the accuracy of the distribution measures.

As it is not known how much of the 15% 'base' undercoverage is attributable to the impact of differential undercoverage, it was decided that the benefit value benchmark should only be applied from 1999-2000 and that it should only be used to remove the deterioration in the survey coverage of benefit transfers that occurred from that time, that is, the increase in undercoverage beyond the base amount of approximately 15%.

IMPACT OF CHANGES

Three distinct changes were made to the SIHC estimates of income as a result of the work

described in this Appendix.

First, the estimates for all years prior to 2000-01 were recalculated using the most up to date demographic benchmark data available and a consistent estimation and weighting system was introduced for all years through to 2000-01. It should be noted that the demographic benchmark data are based on the 1996 Census, not the 2001 Census. Household benchmark data based on the 2001 Census are not yet available and it is essential that the person benchmark data and household benchmark data are consistent.

Second, estimates for the one-off payment to seniors were modelled and added to respondent records for 2000-01.

Third, the additional government cash benefit benchmark was introduced for 1999-2000 and 2000-01 to maintain the SIHC coverage of transfer benefits at a consistent level over time.

Impact on government benefit transfers

The impact of the changes on the SIHC coverage rates of government benefit transfers is shown in table A3. As can be seen, at the start of investigations, the 1999-2000 coverage ratio of 81.2% was substantially below that of 1997-98 but not very far below the previous lowest point of 82.9%. The 2000-01 ratio fell a further 3.0 percentage points, to 78.2%.

After revisions were made to the demographic benchmarks for the years up to 1999-2000, the introduction of identical estimation and weighting procedures for all years, and the introduction of imputed estimates for the one-off payment to seniors in 2000-01, the fall in the coverage ratio between 1997-98 and 1999-2000 was not as great as previously estimated. However, the coverage ratios still showed a clear downward trend in the two years to 2000-01. The fall was even more apparent insofar as the ratios for the first four years showed less variation, after the estimation and weighting system had been standardised, than had been apparent at the start of the investigations. The first four observations now fell within a range of 1.3 percentage points, but there was still a 2.4 percentage point decline from 1997-98 to 1999-2000 and a further 2.4 percentage point decline to 2000-01. Without the contribution of the imputed estimates for the one-off payment to seniors, there would have been a 3.5 percentage point decline to 2000-01.

By definition, the introduction of the government benefit transfer benchmark for the last two years lifted the overall coverage ratio for those years to the benchmark level, that is, 84.7%. (This is marginally higher than the average of the first four years (84.4%) because the values feeding into the benchmark calculation were derived before the estimation and weighting system had been finalised.) The benchmark was applied to total benefits excluding the one-off payment to seniors. However, it can be seen that the magnitude of the impact varied between benefit types. Of the benefit categories shown in table A3, age pension was least affected (up by 3.0 percentage points in 2000-01) and disability support pension the most (up by 7.2 percentage points in 2000-01). The differences reflect the interaction between this particular benchmark and all the demographic benchmarks.

Impact on income distribution

The introduction of the government cash benefit benchmark tended to increase the sample weights of households with relatively low income and therefore lower the weights of households with relatively high income. Consequently, the values of income at the percentile boundaries shown in table A4 were all slightly lower after the introduction of the new benchmark. There was no impact on the percentage share figures (to one decimal place). Some of the percentile ratios measured slightly less income inequality, although P80/P20 and P20/P50 measured slightly greater inequality in 1999-2000. The Gini coefficient would

be slightly higher in 2000-01 if a benefit benchmark had not been introduced. In all cases, the revisions to the measures were considerably smaller than one standard error (see Appendix 3), that is, they do not make a significant difference to the interpretation of the indicators.

Similarly, the correction to include imputed values for the one-off payment to seniors decreased the measures of inequality very slightly, and slightly increased the values of income at the percentile boundaries.

A3 COVERAGE RATES OF FACS AND DVA BENEFIT TRANSFERS(a)

	1994-95	1995-96	1996-97	1997-98	1999-00	2000-01
% COVERAGE						
At start of investigations						
Age pension	87.1	89.3	85.9	91.6	87.8	88.3
Disability support pension	62.9	67.0	74.2	86.5	77.3	76.1
Newstart	67.3	81.7	74.5	73.0	69.9	66.8
Family benefits(c)	85.6	82.6	83.9	85.9	81.0	73.9
All benefits	84.0	82.9	85.9	86.2	81.2	78.2
After standardisation of estimation(d)						
Age pension	88.0	90.9	86.0	90.3	88.7	88.3
Disability support pension	63.7	69.7	73.6	87.0	81.4	81.5
Newstart(b)	66.0	77.0	72.0	73.1	69.1	66.0
Family benefits(c)	85.6	83.4	82.4	84.4	80.3	71.8
All benefits	84.7	83.6	84.5	84.9	82.5	79.0
After imputation of values for one-off payment to seniors in 2000-01						
All benefits	..	..	..	..	..	80.1
After introduction of benefit transfer benchmark in 1999-2000 and 2000-01						
Age pension	..	..	..	..	90.0	91.3
Disability support pension	..	..	..	..	84.5	88.7
Newstart(b)	..	..	..	..	71.3	70.6
Family benefits(c)	..	..	..	..	82.6	75.2
All benefits	..	..	..	..	84.7	84.7

.. not applicable
(a) Government benefits paid by Departments of Family and Community Services and Veterans' Affairs that fall within the definition of income used in this publication.
(b) Includes Jobsearch and Youth Training Allowance.
(c) Includes Family Allowance, Family Payments, and Family Tax Benefit.
(d) Includes revision of demographic benchmarks for 1999-2000 and earlier years, and introduction of a standard estimation and weighting system for all years.

A4 INCOME DISTRIBUTION, EQUIVALISED DISPOSABLE HOUSEHOLD INCOME

Indicator		1999-2000		2000-01		
		Without transfers benchmark	**With transfers benchmark**	**Without transfers benchmark or OOPS (a)**	**With transfers benchmark but not OOPS(a)**	**With transfers benchmark and OOPS(a)**
Income per week at top of selected income percentiles, in 2000–01 dollars(b)						
20th [P20]	$	242	241	244	243	245

50th [P50]	$	407	405	416	413	414
80th [P80]	$	636	636	647	643	644
Share of total income received by persons with						
High incomes(c)	%	38.4	38.4	38.5	38.5	38.5
Low incomes (d)	%	10.5	10.5	10.4	10.4	10.5
Ratios of incomes at top of selected income percentiles						
P90/P10	ratio	3.90	3.89	4.03	4.01	3.97
P80/P20	ratio	2.63	2.64	2.66	2.65	2.63
P80/P50	ratio	1.57	1.57	1.56	1.56	1.56
P20/P50	ratio	0.60	0.59	0.59	0.59	0.59
Gini coefficient	no.	0.310	0.310	0.313	0.312	0.311

(a) Imputed value of one-off payment to seniors.
(b) Adjusted for changes in the Consumer Price Index.
(c) Persons in the top income quintile (9th and 10th deciles) after being ranked by their equivalised disposable household income.
(d) Persons in the 2nd and 3rd income deciles after being ranked by their equivalised disposable household income.

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Current and Annual Income (Appendix)

APPENDIX 5 - CURRENT AND ANNUAL INCOME

INTRODUCTION

The SIHC produces estimates of 'current' income and estimates of full year, or annual, income with respect to the 'previous financial year'. The tables in the main body of this publication refer to 'current' income, that is, estimates of income being received at the time the data were collected from respondents. Current income provides the most up to date information available and in some cases the most accurate information available. But it also has some disadvantages. This Appendix discusses the differences in 'current' and 'annual' income measures and presents alternative estimates relating to 'previous financial year' income.

Table A6 compares current gross income with previous financial year gross income for common reference years. For example, the previous financial year income for reference year 1995-96 is compiled from data collected in the 1996-97 SIHC, whereas the current income for reference year 1995-96 is compiled from data collected in the 1995-96 SIHC.

WAGE AND SALARY INCOME

For wage and salary income, table A6 shows that, for each reference year, aggregate income collected on a previous financial year basis was greater than aggregate income collected on a current basis.

Current wage and salary income relates to usual income from the last payment received by the respondent. The reference period for any individual respondent is likely to be the

previous week, fortnight or month, depending on the length of the pay period for the job(s) in which the respondent is employed. The length of the reference period is collected in the survey so that the value can be scaled to a common basis such as dollars per week (as presented in tables in the main body of this publication) or dollars per year (as presented in table A6 below).

If current wage or salary income contains a payment for irregular overtime worked in the previous pay period, or a pay bonus that occurs infrequently during the year, the irregular components are excluded. If such payments were included in a weekly or fortnightly pay period estimate, the recipient could appear to be receiving substantially more income annually than is likely to be the case and analysis of the respondent's economic wellbeing would be distorted accordingly.

Excluding the extra payments from current income, on practical grounds of measurement, ignores income that does make a contribution to the economic wellbeing of the recipient. To be able to accommodate the extra payments in a current income measure would require substantial additional information about the pay period with the extra payments in it and their likely recurrence in future, as well for pay periods which have more usual or regular levels of payment so that a reasonable estimate might be made of 'current' income including an appropriate share of expected irregular payments. This is very difficult to achieve in a household interview and reporting error could be significant. By taking wage and salary income for the full preceding financial year and retaining irregular components received during the course of the year, wage and salary data in SIHC are collected on the broader basis.

GOVERNMENT PENSIONS AND ALLOWANCES

Current government pensions and allowances also relate to income from the last payment received. Benefits are normally received fortnightly. As with wages and salaries, there are some benefit components, such as quarterly telephone allowance, that are not likely to be included in estimates of current income. They are not as significant a part of total government pensions and allowances as are the irregular components of wage and salary income. Therefore estimates of current government pensions and allowances could be expected to align more closely with previous financial year estimates.

In practice, estimates of government pensions and allowances reported on a previous financial year basis were significantly lower than estimates of government pensions and allowances reported as current income, as can be seen in table A6. The major cause of the difference appears to be higher underreporting of income received some time earlier compared to underreporting of income being received currently.

In cases where it appears likely that an individual SIHC respondent has failed to report previous financial year benefits, previous year benefit income is imputed. For example, where a respondent has reported receiving a current benefit such as age pension, is of an age that would qualify for the age pension in the previous year, and that person has not reported receiving significant income from other sources in the previous financial year, it can be assumed that they probably would have also received the age pension in the previous financial year. In such cases, previous financial year age pension has been imputed on the basis of the amount reported as current income, adjusting for benefit rate changes over the previous 12 months.

However, imputation for previous year benefit income, based on likely ongoing entitlement, is not possible for benefits such as Newstart or youth allowance, and table A6 indicates that, in aggregate, previous financial year income falls short of current income after the

implementation of the imputation procedure described in the previous paragraph. The contributions of imputed values to the aggregate previous financial year income estimates are also shown.

The aggregate value of previous financial year benefits imputed was $1.8 billion for financial year 1993-94 (collected in the 1994-95 SIHC), declining to $0.6 billion for financial year 1998-99 (collected in the 1999-2000 SIHC) and $0.7 billion for financial year 1999-2000. The decline in the size of the imputed values reflects improvements over time to the SIHC data collection and editing methodology.

OWN UNINCORPORATED BUSINESS INCOME

Estimates of current income from own unincorporated business are quite different in nature to the estimates of current income for the two income sources discussed above.

The concept of business income is a net concept. It is the profit or loss derived by deducting operating expenses (including depreciation) from the value of gross output. In the past, many unincorporated businesses did not calculate profit and loss data more than once a year, and for many businesses there are revenues earned or costs incurred only infrequently during the year. Hence SIHC respondents have not been able to provide a value of current business income distinct from the value of business income received in the previous financial year.

Therefore a respondent is only deemed to have current own unincorporated business income if they had such income in the previous year and they are still operating the business. The current income value is defined to be the same amount as the previous year income, scaled up to a full year basis if the business only operated for part of the previous year. Thus it is assumed that the business will have the same monthly profit or loss in the current year as it did in the previous financial year. This is particularly problematic with businesses which only commenced operating toward the end of the previous year, especially if they made a loss in their first months of operation. Also, there is no current income estimate for businesses which only commenced operations in the current year.

INVESTMENT INCOME

Investment income includes interest and dividend income received as a result of the ownership of financial assets, and rent and royalty income received from the ownership of non-financial assets. As for own unincorporated business income, only previous financial year income data are collected from SIHC respondents. Current income from dividends from own incorporated businesses is derived from reported previous financial year data in the same way as current own unincorporated business income, as discussed above. Current income from other forms of investment is derived by simply assuming that current income is equal to previous financial year income.

The rent component of investment income is measured on a net basis, that is, gross rent less operating expenses. The other components, for which associated expenses are normally relatively small, are on a gross basis.

OTHER INCOME

The remaining income sources include superannuation, child support, workers' compensation and scholarships. These are collected both on a current basis and on a

previous financial year basis.

COMPARISON OF ESTIMATES

There are two major advantages of the current income estimates compared to previous financial year income estimates. First, they are more up to date for wage and salaries, for government cash benefits and for 'other' income (as defined in the preceding paragraph), which together accounted for 88% of total current income in 2000-01. Second, they appear to be more accurately reported for government cash benefits, and may also be more accurately reported for those elements of wages and salaries that are included in current income and for 'other' income.

On the other hand, the previous financial year estimates have the major conceptual advantage of being annual estimates with more complete coverage of income components. They have a longer time perspective, which while allowing short-term fluctuations in income to have an influence, do not allow short-term situations to potentially dominate the measure being compiled. If a short-term fluctuation has an undue influence on a current income measure, the measure is not a good indicator of underlying economic wellbeing. Short-term fluctuations may be positive or negative, for example, salary bonuses compared to low income or even nil income during short periods of unemployment.

The previous financial year income estimates also have the attraction of being internally consistent with respect to the time periods to which the underlying income data relate. The current income estimates are compiled from a mix of data collected on a current basis and on a previous financial year basis.

However, this internal consistency does not extend to other aspects of the data. The composition of the household, employment status of members of the household, etc., all relate to the current period. If the composition of the household has changed, previous financial year household income estimates in effect relate to a quasi household. In many cases this will not have a marked effect on the data. If, for example, an additional adult joined the household, their previous financial year income will be included in total 'household' income for the previous financial year, but their presence will be reflected in the household composition data that are used for calculating the equivalising factor for that previous year, muting the impact of the artificially inflated previous year income for the household.

However, the issues in analysis due to household composition changing between the previous and current years can be more marked. For example, for households with new members that do not have previous financial year income recorded in SIHC, due to being out of scope at that time (perhaps overseas), their previous financial year income does not contribute to the previous financial year income compiled for the household. But their presence is reflected in the equivalising factor applied to the income of the rest of the household, resulting in an underestimate of equivalised income of the household. Similarly, a household may have had an additional member in the previous year and that person provided the bulk of the income for the household. But since SIHC can only include the previous financial year income of the household members remaining at the time of interview, the household may incorrectly appear to have had very low income in the previous year, perhaps well below the levels which would have entitled members to social security benefits. While it is possible to omit such households from income distribution calculations, that has not been done for the tables included in this appendix.

Table A7 provides income distribution indicators compiled from previous financial year data. It provides alternative estimates to the current income estimates provided in table 1 in the

main body of this publication. Comparisons can be made between the two tables for the reference periods 1994-95 to 1999-2000, and a summary is given in the following table.

A5 SELECTED INCOME DISTRIBUTION INDICATORS, EQUIVALISED DISPOSABLE HOUSEHOLD INCOME

		CURRENT INCOME BASIS			PREVIOUS FINANCIAL YEAR BASIS			
		1994-95	1999-2000	% change	1994-95	1999-2000	% change	Difference in % change
Mean income per week, in 2000-01 dollars								
Low income(a)	$	227	241	6.4	230	249	8.2	1.8
High income(b)	$	792	879	10.9	807	917	13.7	2.8
Income shares								
Low income(a)	%	10.8	10.5	-2.3	10.7	10.5	-2.5	-0.2
High income(b)	%	37.8	38.4	1.6	37.7	38.6	2.5	0.8
Percentile ratios								
P90/P10	ratio	3.77	3.89	3.1	3.90	4.06	4.3	1.2
P80/P20	ratio	2.56	2.64	3.4	2.63	2.64	0.6	-2.7
Gini coefficient	no.	0.302	0.310	2.8	0.302	0.313	3.6	0.8

(a) Persons in the 2nd and 3rd income deciles after being ranked by their equivalised disposable household income.
(b) Persons in the top income quintile (9th and 10th deciles) after being ranked by their equivalised disposable household income.

The previous financial year estimates show stronger growth in real incomes between 1994-95 and 1999-2000 for both the high income and the low income group, with greater additional growth in the high income group. The P80/P20 ratio derived from previous financial year estimates shows less increase in inequality than the ratio derived from current income estimates (0.6% compared to 3.4% respectively). However, for all the other distribution indicators, the opposite is the case. For example, the Gini coefficient is 0.302 in 1994-95 on both a previous financial year basis and a current basis. However, the previous financial year income based coefficient rose to 0.313 in 1999-2000, while the current income based coefficient rose to 0.310.

FUTURE DEVELOPMENTS

The ABS is taking steps to improve the quality of both current and previous financial year estimates.

The focus for current estimates is to get more up to date information of own unincorporated business income. However, because of the nature of business income, the underlying concept would still be an annual one. The information collected would relate to the likely business income outcome of the respondent in the year in which the survey is being conducted, to avoid issues such as imputing ongoing losses in start up situations. Changed record keeping practices by businesses following the introduction of The New Tax System in July 2000 are expected to be of assistance to respondents in providing relevant information for this purpose.

The ABS is also exploring ways of using computer assisted interviewing tools during the

SIHC interview to better identify those respondents who appear to be providing incomplete previous financial year data.

A6 CURRENT AND PREVIOUS FINANCIAL YEAR GROSS INCOME(a): $BILLION

	1993–94	1994–95	1995–96	1996–97	1997–98	1998–99	1999–2000	2000–01
Wages and salaries								
Current income	na	194.7	199.3	211.6	223.6	na	251.1	268.3
Previous financial year income(b)	194.7	204.4	219.1	232.2	na	257.7	277.0	na
Government cash benefits								
Current income	na	34.3	36.5	38.6	39.0	na	41.2	46.5
Previous financial year income(b)	30.7	32.8	34.9	36.2	na	37.7	40.5	na
Amount imputed to offset underreporting	1.8	1.4	1.0	0.8	na	0.6	0.7	na
Own unincorporated business income								
Current income	na	18.8	23.2	21.4	23.6	na	28.7	27.7
Previous financial year income(b)	18.5	22.8	22.5	24.4	na	27.5	25.9	na
Investment income								
Current income	na	10.7	10.9	14.4	13.2	na	17.3	16.3
Previous financial year income(b)	10.9	11.0	14.3	13.0	na	17.3	15.7	na
Other income								
Current income	na	7.2	7.9	8.2	9.9	na	10.5	11.7
Previous financial year income(b)	6.6	7.0	7.5	8.4	na	8.5	9.7	na
Total income								
Current income	na	265.8	277.8	294.3	309.3	na	348.9	370.5
Previous financial year income(b)	261.4	278.0	298.4	314.2	na	348.7	368.8	na

na not available
(a) Historic data in this table are not adjusted for changes in the CPI.
(b) Compiled from data collected in the SIHC of the year following the reference year.

A7 INCOME DISTRIBUTION INDICATORS, PREVIOUS FINANCIAL YEAR INCOME(a)

Indicator		1993-94	1994-95	1995-96	1996-97	1998-99	1999-2000
Mean income per week, in 2000-01 dollars(b)							
Lowest quintile	$	159	166	171	173	175	179
Second quintile	$	274	276	280	278	296	300
Third quintile	$	383	380	386	390	417	419
Fourth quintile	$	510	512	514	526	559	561
Highest quintile	$	799	807	821	843	898	917
All persons	$	425	428	434	442	469	475
Second and third deciles	$	226	230	234	232	244	249
Income per week at top of selected percentiles, in 2000-01 dollars(b)							
10th (P10)	$	183	187	191	192	198	201
20th (P20)	$	223	228	234	232	242	248
30th (P30)	$	273	276	279	278	296	297
40th (P40)	$	326	325	330	329	353	355
50th (P50)	$	383	380	385	390	416	420
60th (P60)	$	439	441	442	451	485	485
70th (P70)	$	502	508	513	523	555	558
80th (P80)	$	598	599	596	608	649	656
90th (P90)	$	732	728	729	746	791	816
Income share							
Lowest quintile	%	7.5	7.8	7.9	7.8	7.5	7.5
Second quintile	%	12.9	12.9	12.9	12.6	12.6	12.6
Third quintile	%	18.0	17.8	17.7	17.6	17.8	17.6
Fourth quintile	%	24.0	23.9	23.7	23.8	23.8	23.6
Highest quintile	%	37.6	37.7	37.8	38.2	38.3	38.6
All persons	%	100.0	100.0	100.0	100.0	100.0	100.0
Second and third deciles	%	10.6	10.7	10.8	10.5	10.4	10.5

Ratio of incomes at top of selected income percentiles

P90/P10	Ratio	4.00	3.90	3.82	3.89	4.00	4.06
P80/P20	Ratio	2.68	2.63	2.54	2.62	2.68	2.64
P80/P50	Ratio	1.56	1.58	1.55	1.56	1.56	1.56
P20/P50	Ratio	0.58	0.60	0.61	0.60	0.58	0.59
Gini coefficient	no.	0.304	0.302	0.302	0.307	0.312	0.313

(a) Compiled from data collected in the SIHC of the year following the reference year. Income is equivalised disposable household income.
(b) Adjusted for changes in the Consumer Price Index.

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